The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1522.—Vol. XXXIV. LONDON, SATURDAY, OCTOBER 22, 1864. {STAMPED.....SIXPENCE. UNSTAMPED..FIVEPENCE

MR. JAMES CROFTS, SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 22 years.)

Mr. Crofts transacts business, in the way of PURCHASE or SALE, in every description of stocks, but particularly in BRITISH MINES, in no case departing from the position of a broker, at net prices.

*** Holders of mining shares DIFFICULT of SALE in the OPEN MARKET may find purchasers by negociation, through Mr. Crofts' agency. Also, parties requiring ADVICE how to act as to the DISPOSAL, or ABANDONMENT, of doubtful mining stocks may profitably avail of Mr. Crofts' long experience on the market in all cases of doubt or difficulty.

FOR SALE (offers wanted):—150 Vale of Towy; 20 Crane; 13 Curtis.

*** FOR SALE:—200 Prince of Wales, 3s. 6d.; Bedoi-Aur, 17s. 6d.; Havan Silver-Lead (£4 paid-up), £2¾; 1 Leawood; 1 Cwmbrane; 100 Unity, 8s. 9d.; 20 South Darren, £3⅜; 25 Wheal Hope, 20s.; 50 South Grenville, 10s. 9d.; 160 New North Misers (12s. 6d. paid), 3s. 3d.; all net.

October 21, 1864.

MR. JAMES LANE, No. 44, THREADNEEDLE STREET,
LONDON, E.C.

James Lane has FOR SALE at nett prices:—5 Basset and Grylls; 2 Buller, £16; 25 Bedoi-Aur; 10 Bryntail, £3¼; 50 Crebor, 42s.; 100 Calstock Consols, 20s.; 20 Carn Camborne, 32s.; 20 Dale; 30 East Providence, £3¾; 25 East Lovell; 20 East Rosewarne, £3; 10 East Chiverton, £2; 20 East Russell; 50 Great Busy, £2¼; 50 Guriyn, 12s. 6d.; 20 Hallenbeagle, £3¼; 25 Havan (£5 paid), 25s.; 20 Lady Bertha, 8s. 6d.; 5 Wheal Margaret, £7⅛; 50 New Wh. Rose, 8s. 6d.; 20 North Treskerby, £3; 100 North Devon, £2; 50 Prince of Wales, 4s.; 25 St. Day United, 32s.; 5 Sithney and Carnmeal; 10 Wheal Kitty (St. Agnes), £6; 10 West Caradon, £7⅛; 50 Vale of Towy, 4s.; 5 Vigra and Clogau, £21½.

MR. PETER WATSON, 79, OLD BROAD STREET,
LONDON, E.C.

MR. WILLIAM LELEAN BUYS and SELLS all descriptions of ENGLISH and FOREIGN STOCKS and SHARES, INSPECTS MINES, and TRANSACTS all the usual BUSINESS of a STOCK and SHAREDEALER. Parties may rely upon him for sound advice and punctuality in all his engagements.

N.B.—Mr. Lelean's "Mining and General Investment Circular," No. 101, now ready, which will be sent free on application.

Bankers: Messrs. Robarts, Lubbock, and Co.

Offices, 11, Royal Exchange, London, E.C.

JOHN RISLEY, 32, LOMBARD STREET, LONDON, E.C.
SHARES in MINES BOUGHT and SOLD on commission, at 1¼ per cent., for immediate cash. Bankers: London and Westminster, Lothbury.

MR. E. GOMPERS, MINING OFFICES,
3, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
BUSINESS TRANSACTED in BRITISH and FOREIGN STOCKS and SHARES.
Terms, 1¼ per cent. Bankers: London and Westminster Bank.

MR. H. WADDINGTON, MINING AND SHAREBROKER,
20, THROGMORTON STREET, LONDON, E.C.
Shares in railways, mines, &c., bought and sold on the usual commission.

Clifford Amalgamated, Grambler and St. Aubyn, East Grambler, and Great South Tolgus should be bought at once. West Seton shares should be bought at the present reduced price.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, E.C., has FOR SALE:—

Bedford United.	Great Laxey.	North Robert.
Clifford Amalgamated.	Great North Downs.	Tincroft.
East Russell.	Hallenbeagle.	South Condurrow.
East Caradon.	Great Busy.	Wheal Uny.
East Carn Brea.	Hingston.	Wheal Seton.
East Rosewarne.	Kelly Bray.	Wheal Grenville.
East Lovell.	Marke Valley.	Wheal Rose.
East Grenville.	North Downs.	Wheal Creber.
East Basset.	North Treskerby.	West Chiverton.
Great Wheal Vor.	New Rosewarne.	Wheal Edward.

Capitalists should consult T. Rosewarne immediately respecting mining shares, the present depressed state of the market enabling him to select certain mines which will pay cent. per cent. Money advanced on good mining shares.

October 21, 1864. Bankers: Bank of London.

MATTHEW GREENE, STOCK AND SHAREDEALER,
9, GRACECHURCH STREET, LONDON.
Matthew Greene strongly advises the purchase of East Laxey shares at present prices.

Report—East Laxey Mine, Oct. 19, 1864.—The leading part of the lode which we are carrying in the shallow adit is increased in size, being now 3 ft. wide, but still chiefly gossan, mixed with jack and particles of lead ore. The lode in the deep adit, which is only just now got under cover, is improving in size and appearance, being now 2½ feet wide—a nice looking gossan. We are busy preparing No. 1 lode, and shall be ready in the course of another week or ten days.—R. Rowe.

An OFFER WANTED for any part of 50 New Wendron shares.
Commission, 1¼ per cent.
Bankers: London and County Bank.

MATTHEW GREENE has REMOVED from 27, Austinfriars,
to No. 9, GRACECHURCH STREET, near CORNHILL, LONDON.

MR. J. W. GILBERT, MINE SHAREBROKER,
1, PINNER'S COURT, OLD BROAD STREET, LONDON.
J. W. Gilbert recommends the immediate purchase of shares in the following mines, having confidence a rise of 50 per cent. (and above) will take place before Midsummer, 1865:—

No. of shares.			No. of shares.		
1906 ..	East Lovell	£12 – 12⅛	50000 ..	Frontino & Bolivia..	15s.– 20s
6000 ..	East Carn Brea	6⅝– 7	501 ..	Tres. & Tretharrup.	£7⅛– 8
6000 ..	North Chiverton....	2 – 2⅛		(with £13⅛ per share called up, these shares in former working sold at £1900 each.)	
1346 ..	North Grambler....	2¾– 3⅛			

Those who acted on my advice, by purchasing East Lovell at £8, can make handsome profit at the present price—£12 to £12⅛.

East Grenville.—Parties will do well to consult whether to buy or sell.

October 21, 1864.

MR. D. STICKLAND, M.E., having had upwards of 40 years' mining experience in Cornwall, several years of which he has had the entire management of mines therein, enables him to GIVE GOOD ADVICE thereon.

MINES INSPECTED and faithfully REPORTED ON. DEALER in MINING, RAILWAY, and OTHER SHARES.

His monthly "Circular" for August contains a selected list of Cornish and other mines. Forwarded on receipt of six postage stamps.

Wellington Chambers, 75, Cannon-street West, London, E.C.

MR. JOHN BATTERS, STOCK AND MINING
SHAREBROKER, 13, THROGMORTON STREET, LONDON, E.C., pays particular attention to British Lead, Copper, and Tin Mines, for which he solicits orders to sell or buy, at nett prices.

MR. WALTER TREGELLAS, STOCK AND SHAREBROKER,
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C., strongly recommends the following mines for investment, which are safe to have a rise in price:—Santa Barbara Gold, North Roskear, North Shepherds, Wheal Lovell, New Rosewarne, New Wendron, East Basset and Grylls, New Trevenen, and Great Wheal Vor.

MR. J. P. ENDEAN, STOCK AND SHAREBROKER,
1, CROWN COURT, OLD BROAD STREET LONDON, E.C.
Having had 25 years' experience in the mining districts of Devon and Cornwall, and three in the London market, with daily information of important changes from qualified agents, also the most authentic reports relating to other investments, he is in a position to afford the earliest information to his clients, and to direct capitalists whether to buy or sell in mines, railways, or other securities.

Investors should apply to him for reliable information relative to the Chiverton Mines, also the Camborne and Illogan districts.

A carefully selected list of sound progressive and dividend shares (certain to give a large percentage immediately) forwarded on receipt of 5s. in stamps.

Orders and telegrams receive immediate attention.

MR. GEORGE BUDGE, SHAREDEALER, No. 4, ROYAL
EXCHANGE BUILDINGS, LONDON, E.C. (Established 17 years), has FOR SALE at nett prices:—50 East Grenville, £7¼; 20 Trencrom, £3; 50 Hingston Down; 50 East Rosewarne, £2 18s. 9d.; 150 Calstock Consols, 20s.; 70 Kelly Bray, 12s.; 2 Wheal Seton; 1 South Caradon; 100 Redmoor, 3s. 6d.; 100 Sithney Metal, 35s.; 5 Margaret; 1 Devon Consols; 200 Don Pedro, 11s. 3d.; 175 Bottle Hill, 2s.; 250 Anglo-Brazilian, 5s. 3d.; 20 Great Laxey; 500 Great Northern, 2s.; 20 East Lovell; 150 Vale of Towy, 5s. 6d.; 15 Wentworth Consols, £7¾; 200 Wheal Pollard, 2s.; 10 Great Wh. Vor; 150 Welsh (Gold), 20s.; 20 North Treskerby; 100 Frontino and Bolivia, 20s.; 5 East Basset; 15 East Caradon; 50 Chiverton Valley; 20 Gonamena; 50 Bryntail; 5 West Chiverton; 100 Nant-y-Iago, 3s. 6d.; 5 North Roskear; 200 Santa Barbara, 8s.; 100 Trewoatha; 2 West Sharp Tor; 50 Central Misers, 35s. 6d.; 5 West Caradon; 10 Sithney Carnmeal; 20 East Providence.

GEORGE MOORE,
1, CROWN COURT, THREADNEEDLE STREET.

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

30 Anglo-Brazilian, 4s. 6d.	20 Glasgow Caradon, £2⅞.	10 Sithney Metal, 25s.
10 Anglo-Mex. Mint, £19¼	10 Great Laxey, £15 7s 9d	50 Santa Barbara, 8s. 3d.
5 Brynford Hall, £7½.	30 Gt. S. Chiverton, 26s 9d	30 St. Day United.
50 Buller and Basset, 2s.	20 Gt. Wh. Busy, £2 7s 6d	5 St. John del Rey, £35⅛
5 Billins, £13.	20 Hallenbeagle, £2 1s. 3d.	100 St. David's Gold, 6d.
20 Bedford United, £2¼.	1 Herodsfoot, £38.	30 St. Just Consols, 4s.
30 Bottle Hill, 2s.	10 Hingston Down, £4¼.	20 So. Car. Hooper, 2s. 9d.
10 Bryn Gwiog.	20 Illogan.	2 Stray Park, £20 18s. 9d
20 Bedoi-Aur.	10 Kelly Bray, 10s. 6d.	2 Trelawny, £19¾.
1 Buller, £13½.	20 Linares, £5¾.	10 Tolvadden, 16s. 9d.
3 Clifford Amalgamated.	10 Marke Valley, £4⅛.	20 Tincroft, £15⅝.
1 Carn Brea, £52½.	50 Nant-y-Iago, 3s. 9d.	20 Treleigh, 13s. 9d.
2 Cwm Erfin, £34.	10 North Pool, £2.	100 Treweatha,
20 Chiverton Valley.	5 North Wh. Crofty, £3.	100 United Mexican.
50 Cape Copper, £9⅞.	30 North Devon, 37s. 6d.	50 Vale of Towy, 5s.
20 Carn Camborne, 33s. 9d.	20 North Downs, 20s. 9d.	1 W. Chiverton, £58.
10 Chiverton Moor, £2 12 6	15 New Wendron, £3.	1 West Sharp Tor, £62.
10 Chiverton, £5¾.	20 North Treskerby, £3.	50 West Trevellyan, 1s.
20 Central Misers, 36s.	50 North Misers, 3s. 9d.	10 West Stray Park.
10 Cobre, £27.	40 New Martha, 22s. 6d.	20 Wheal Union.
10 Cook's Kitchen, £12½.	1 North Roskear, £19¾.	10 Wheal Edward, 12s. 6d.
10 Clijah & Went., £3 12 6	20 North Shepherds, 36s 6d	1 Wheal Seton, £205.
100 Don Pedro, 6s. 10d.	30 North Chiverton, £2 1s	2 West Caradon, £7 5s.
20 Drake Walls, 18s. 9d.	1 New Seton, £62½.	1 West Tolgus, £57.
1 East Basset, £60⅝.	5 Nangiles, £25½.	20 Wh. Grenville, £5 17 6
20 East Carn Brea, £6⅞.	20 North Basset, 33s.	5 Wheal Margaret, £7.
50 East del Rey, 8s. 9d.	5 New Rosewarne, £11.	1 West Frances, £25.
10 East Russell, £4½.	2 Providence, £36¾.	50 Worthing, 18s. 3d.
20 East Lovell, £12⅜.	50 Port Phillip, 18s. 9d.	5 Wheal Crebor, 41s.
5 E. Rosewarne, £2 18 9	30 Prince of Wales, 3s. 9d.	10 Wentworth Consols, £7.
20 East Grenville, £7 2 6	2 Poibreen, £13½.	5 West Basset, £8⅛.
30 East Laxey, 37s. 6d.	30 Quebrada (£5 10s. paid)	10 Wendron Consols, £3.
10 East Providence, £3 8 9	10 Rosewarne United.	1 Wh. Mary Ann, £16¼.
10 East Caradon, £23¾.	50 South Grenville, 10s. 3d.	30 Wheal Unity, 3s. 3d.
50 Fortuna, £3 8s. 9d.	20 South Condurrow, 30s.	1 Wheal Basset, £92.
5 Gt. Wh. Vor, £31¼.	10 South Lovell, £2.	10 Wheal Hearle, 9s. 3d.
100 Gt. Northern Copper, 1s. (call paid).	10 St. Just United.	5 Wheal Uny, £3 12s. 6d.
	30 Silver Vein.	30 Yudanamutana, £1⅞.
5 Great Fortune, £7⅜.	10 South Darren, 30s.	

2, Adam's-court, Old Broad-street, October 21, 1864.

MESSRS. VIVIAN AND REYNOLDS, 37, OLD BROAD
STREET, LONDON, E.C., MINING ENGINEERS, INSPECTORS of MINES, COMMISSION, and GENERAL AGENTS for the PURCHASE or SALE of MINE SHARES, RAILWAY, and EVERY OTHER DESCRIPTION of STOCK.

Commission on share transactions 1¼ per cent. on £100 and above, and 2½ per cent. on less sums.

NOTICE OF REMOVAL.—Mr. EDWARD COOKE has
REMOVED from No. 75, Old Broad-street, to No. 2, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.

MR. EDWARD COOKE, MINING SHAREBROKER,
2, CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C.
Mr. Edward Cooke has removed to the above address, where all communications on matters relating to business will meet with his usual attention.

Oct. 21, 1864. Bankers: Alliance Bank, Lothbury.

MR. GEORGE BATTERS strongly recommends his friends to buy
West Chiverton, Chiverton, Herodsfoot, South Caradon, Devon Great Consols, Great Wheal Vor, Prosper United, Wentworth Consols, and Sithney Wheal Metal for investment. These shares will pay good interest for money at present quotations.

76, Old Broad-street, London, E.C.

MR. THOS. THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

WILLIAM SEWARD, MINING BROKER, STOCK AND
SHAREDEALER, 19, THROGMORTON STREET, LONDON, E.C.
Commission, 1¼ per cent. on all transactions.

MR. WM. BIRDSEY, MINE AND SHAREBROKER,
No. 2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
W. Birdsey is a BUYER of 500 (or any part of) Alten and Quenangen Mining Company (Limited), at £2 per share.

MESSRS. WARD AND JACKMAN, SHAREBROKERS,
2, ADAM'S COURT, OLD BROAD STREET AND
MINING EXCHANGE, LONDON, E.C.
Bankers: London and Westminster, Lothbury.

RICHARD CLIFT, MINE SHAREDEALER,
late of Redruth, now 48, THREADNEEDLE-STREET, LONDON, where all letters are to be addressed.

WILLIAM WARD,
29, THREADNEEDLE STREET, LONDON, E.C.
SELLER of Worthing, at 18s. 6d. BUYER of Yudanamutana, at £1¾.

MR. THOMAS CARTHEW, MINING OFFICES,
17A, SISE LANE, BUCKLERSBURY, LONDON, E.C.
Reliable information respecting mining generally can be obtained by applying as above.
Bankers: Robarts, Lubbock, and Co., 15, Lombard-street, London.

MR. G. D. SANDY, SHAREDEALER, No. 48,
THREADNEEDLE STREET, LONDON, E.C., has SPECIAL BUSINESS in the FOLLOWING SHARES:—

80 Bedoi-Aur.	100 Great Retallack.	3 Stray Park.
100 Caradon Hill.	50 Great South Chiverton.	30 Tolvadden.
20 Camborne Vean.	20 Great Laxey.	50 West Great Work.
2 Clifford Amalgamated.	3 Herodsfoot.	20 Wheal Agar.
20 Chiverton.	5 New Rosewarne.	3 Tremayne.
20 East Grenville.	50 North Downs.	35 Wh. Kitty (St. Agnes).
50 East Laxey.	25 North Shepherds.	10 Wheal Ludcott.
20 East Rosewarne.	30 North Treskerby.	3 Wheal Reeth.
10 Gonamena.	20 Pendeen Consols.	200 Unity.
15 Great North Downs.	50 North Robert.	100 Vale of Towy.

N.B.—Sellers or buyers of any of the shares named can be treated with at close prices, nett or on commission.

A selected list of *bona fide* shares for investment forwarded gratis.

Current Daily Price List may be obtained as usual.

GEORGE RICE, SHAREBROKER, 5, COWPER'S COURT,
BIRCHIN LANE, LONDON (22 years' experience).
Money advanced on mining shares.

Oct. 21, 1864. Bankers: Bank of London.

JAMES HUME, SHAREBROKER, 74, OLD BROAD STREET,
AND MINING EXCHANGE, LONDON, E.C.
Business transacted on commission or nett.
Bankers: London Joint-Stock Bank.

MR. WILLIAM BARTLETT has the FOLLOWING SHARES
FOR SALE, at nett cash prices:—

10 Long Rake, £2¼.	20 East Vor, 34s.	20 East Providence, £3¼.
20 Wheal Hope, 25s.	30 Wheal Grenville, £5¾.	1 Wheal Seton, £201.
50 East Chiverton, £1½.	20 North Basset, 31s.	10 Chiverton, £6.
5 Clifford Amal., £31.	25 North Treskerby, £3.	2 North Roskear, £19¾.
20 Wheal Union, £1¼.	50 Kelly Bray, 12s.	5 Trelawny, £19⅞.
10 Great Laxey, £15¾.	30 East Grenville, £7½.	10 Great Vor, £31¼.
5 Tincroft, £15⅞.	1 West Seton, £214.	2 South Basset, £8¼.
1 West Basset, £8⅛.	50 West Vor, 37s. 6d.	20 Wheal Caradon.
10 Great Fortune, £7¾.	1 Providence, £37½.	5 East Lovell, £11½.

Bankers: Alliance Bank, Lothbury.

Offices, No. 2, Bucklersbury, London, E.C.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S,
BISHOPSGATE STREET, LONDON, E.C. (late of 48, Threadneedle-street), STOCK AND SHAREDEALER. (Established Ten Years.)

BUSINESS TRANSACTED in EVERY DESCRIPTION of SHARES, at closest market prices, either nett or on commission. Reliable information given either personally or by letter upon the purchase, sale, or exchange of every description of stock.

FOR SALE:—10 Bryntall, £3⅛; 50 Kelly Bray, 11s. 9d.; 70 Bedoi-Aur, 11s. 6d.; 30 West Jane; 10 North Buller; 75 Vale of Towy, 4s. 9d.; 20 South Grenville; 30 East Laxey, 37s.; 5 Great Laxey, £16⅜; 5 Wheal Chiverton, £5¾; 5 East Lovell, £12½; 15 East Russell, £4¾; 10 Wheal Grenville, £5⅞; 40 Lady Bertha, 10s. 6d.

MR. T. P. THOMAS, MINING AGENT AND
AUCTIONEER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.

MR. T. E. W. THOMAS, MINING AGENT AND GENERAL
MINING SHAREDEALER,
2, PINNER'S COURT, OLD BROAD STREET, LONDON.

MR. FRANCIS G. LANE, No. 2, ROYAL EXCHANGE,
LONDON, E.C., has the following SHARES FOR SALE, free of commission:—

10 Great Laxey, £15⅝.	30 North Downs, 21s.	25 E. Rosewarne, £2 17 6
50 Prince of Wales, 3s. 6d.	50 South Condurrow, 30s.	40 Furze Hill Wood, 3s 9d
50 Vale of Towy, 5s.	10 Cape Cornwall (£2 10s. paid), 27s.	50 Wheal Hartley, 7s. 6d.
20 North Shepherds, £2.		50 North Misers, 4s.
50 Wheal Crebor, 42s.	10 East Caradon, £24¼.	10 New Wh. Vor & Metal
15 St. Just United, £2.	25 Marke Valley, £4⅛.	United, 1s.
20 South Darren, 30s.	20 Treworlis, £1⅛.	100 Trumpet United, 6d.
20 South Lovell, £2.	35 Carn Camborne, 34s.	5 Quebrada, £4¼.
	20 Chiverton, £6¼.	

Parties of respectability can have transfers registered into their names previous to payment. Bankers: London and County Bank.

MR. F. W. MANSELL, MINING SHAREBROKER,
75, OLD BROAD STREET, LONDON, E.C.

MR. JOHN R. PIKE, GENERAL SHAREDEALER,
OFFERS his SERVICES to INVESTORS,
3, PINNER'S COURT, OLD BROAD STREET, LONDON.

SHARES WANTED IN THE FOLLOWING MINES,
most of which are at the same time strongly recommended for an early and immense rise in value:—

South Condurrow.	Wheal Jane.	East Lovell.
Bryntail.	Wheal Margaret.	Trencrom.
Clifford Amalgamated.	Camborne Vean.	Rosewarne United.
Carn Camborne.	Kitty (Lelant).	West Caradon.
New Rosewarne.	South Basset.	Grambler and St. Aubyn.
	East Grambler.	

Friends and investors, if they would consult their own interests, will do well to act upon this advertisement, and not treat it as one of the empty statements so often put forth in the public journals. HUBERT BARNES RYE.

Mining Offices, 77, Old Broad-street, London, and Mining Exchange, Oct. 21, 1864.

NOTICE OF REMOVAL.

MR. J. B. REYNOLDS has REMOVED from 54, Threadneedle
Street, to 2, HATTON COURT (49, Threadneedle Street).
N.B.—Orders to buy and sell mining shares promptly attended to.
October 21, 1864.

NOTICE OF REMOVAL.—Mr. JOHN GREEN begs to
intimate to his friends and correspondents that he has REMOVED from No. 27, Austinfriars, to No. 9, GRACECHURCH STREET.

FOR SALE, FIFTY NORTH POOL SHARES (or any part), at
£3 10s. per share, cash.—Apply to Mr. T. Carter, mine sharedealer, Camborne.

WANTED, SHARES in SOUTH CHIVERTON,
WENTWORTH CONSOLS, and MINERAL BOTTOM MINES, in Ferranzabuloe.—Address, stating number and lowest price per share, to Mr. John Goyne, St. Agnes.

WEST PAR CONSOLS.—FOR SALE, this MINE, with
the MACHINERY and MATERIALS thereon. Full particulars, with permission to inspect, can be obtained by personal application to Capt. Woolcock, at the mine; and tenders to be addressed to Mr. J. H. Murchison, 8, Austinfriars, London, on or before the 27th inst.—October 20, 1864.

THE ADVERTISER, having had considerable experience in
practical mining, and a knowledge of assaying, is DESIROUS of ENGAGING HIMSELF to a respectable company to proceed to any part of the world, to EXPLORE and REPORT on MINERAL PROPERTIES. References given of the highest respectability.—Address, "C. B.," Mining Journal office, 26, Fleet-street, London, E.C.

SITUATION WANTED, by a PRACTICAL MINE AGENT,
who has been employed for a great many years as underground agent in mines in England, Scotland, and Germany, and is competent to keep the accounts of a mine, and can give most satisfactory references as to character and ability.—All applications to be addressed to "H. P.," Mining Journal office, 26, Fleet-street, London, E.C.

A PRACTICAL MINING and MECHANICAL ENGINEER, of
25 years' experience at home and foreign, and who speaks Spanish and Italian fluently, is DESIROUS of an ENGAGEMENT, at home or abroad; or would UNDERTAKE the SURVEY and INSPECTION of ANY MINING PROPERTY in any part of the world.—Address, "B.," Mining Journal office, 26, Fleet-street, London, E.C.

TO CAPITALISTS.—The LESSEE of a FIRST-RATE
COLLIERY in NORTH WALES WANTS a PARTNER, with about £3000. A mining engineer or practical colliery manager might have the management. A profit of 4s. per ton can be clearly shown on the coal raised in the royalty, which is an extensive one.—Address, "Bryn," care of Mr. H. Greenwood, advertising agent, Liverpool.

THE ADVERTISER, who has an extensive connection, is
DESIROUS of UNDERTAKING the SALE of HEMATITE, YORKSHIRE, and COLD BLAST PIG-IRON, and of MALLEABLE BARS, HOOPS, and PLATES, in the WEST RIDING of YORKSHIRE.—Address, "C. E.," Mining Journal office, 26, Fleet-street, London, E.C.

BIRMINGHAM METAL TRADE.—METAL AGENCY
WANTED for BIRMINGHAM, WOLVERHAMPTON, and STAFFORDSHIRE generally. The advertiser has for many years done business with all the leading exporters and consumers of all kinds of metal used in the staple trade of the district. The highest references, &c., given.—Address, "Ferrum," *Gazette* office, Birmingham.

EAST WHEAL ABRAHAM MINING COMPANY.—
Notice is hereby given, that the OFFICE of this company is REMOVED from 9, Winchester-buildings, to 1, GREAT WINCHESTER STREET, E.C.
HENRY WILLS, Sec.

THE CARBERRY MINING COMPANY (LIMITED).—The
directors hereby give notice, that the ORDINARY HALF-YEARLY MEETING of the company will be HELD at 29, Westmoreland-street, Dublin, on MONDAY, the 7th day of November, 1864, at the hour of Two o'clock in the afternoon, for the purpose of receiving the directors' report and statement of accounts, the election of a director, and the transaction of the other ordinary business of the company.
By order, J. P. O'REILLY, Sec.

29, Westmoreland-street, Dublin, October 18, 1864.

THE SOVEREIGN GOLD MINING COMPANY
(LIMITED).—Notice is hereby given, that an ORDINARY GENERAL MEETING of the shareholders will be HELD at the offices, 20, St. Helen's-place, on MONDAY, the 31st inst., at Eleven o'clock precisely, to transact the general business of the company. By order of the Board, W. J. LAVINGTON, Sec.

UNITED MEXICAN MINING COMPANY (LIMITED).—
Notice is hereby given, that the ORDINARY HALF-YEARLY GENERAL MEETING of proprietors will be HELD at the office of this company, on WEDNESDAY, the 9th day of November next, at One o'clock precisely.

The transfer books will be closed on the afternoon of the 29th inst., and re-opened on the day succeeding the meeting. By order of the Board,
W. M. BROWNE, Sec.

No. 5, Finsbury-circus, London, E.C., October 20, 1864.

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A Monthly Investment Circular on application.

Original Correspondence.

USEFUL APPLICATION OF BLAST-FURNACE SLAGS.

Sir,—Seeing in the *Mining Journal* last week a letter from a correspondent, asking for information as to the new mode of turning iron slags to account, which I brought before the British Association at Bath, I beg to send you such particulars as are within my knowledge. The method referred to is the invention of Mr. Parry, of the Ebbw Vale Works, and it consists in converting the slag into such a state that it can be very easily reduced to fine powder. Solid blast-furnace slag is a very untractable material to deal with in the state in which it is generally met with; but after it has been subjected to the treatment devised by Mr. Parry, it has no longer the ordinary compact, stony texture, which renders it so difficult to deal with; it is then more like an excessively vesicular kind of pumice-stone, or a kind of vitreous wool, which may be crushed to powder with the greatest ease, even in the hand.

When the slag has been reduced to powder in this way, it is to be mixed with a certain proportion of quick lime, and made into bricks by pressure. Taking the composition of blast-furnace slag to be, on the average, as follows, in 100 parts:—Silica, 45; alumina, 15; lime and magnesia, 40=100; it seems probable that this material would prove very durable for building purposes, especially if the bricks are made compact and close in texture, so as to offer an effectual resistance to the penetration of water charged with carbonic acid, which is the main cause for what is termed the decay of building materials. The bricks which I have seen made from the disintegrated slag certainly present an exterior which suggests the idea of strength and durability. This fact, together with the inference which may be drawn from the composition of the slag, seem to constitute good ground for anticipating that this application of blast-furnace slag will prove more successful than those which have previously been attempted, and in which the texture of the slag, and its liability to split, were the chief causes of failure. Of course the qualities of the bricks made of the slag, with an admixture of lime, and their capability of resisting destructive influences, both mechanical and chemical, must be established by satisfactory test and experience, before it will be safe for those who are responsible for the security and durability of buildings to place confidence in this new material. It may be even that the use of lime in the preparation of the bricks has disadvantages which render it undesirable, and that some other material would answer the purpose better. It may be that the bricks would be rendered more durable by some degree of burning; but all these questions are merely matters of detail, the main things for consideration, as it appears to me, is that the slag can be easily converted into a manageable condition, and one that is particularly well adapted to meet the requirements of the manufacture of bricks and artificial stone, for which there is now a growing demand, and a great probability of its extensive application, provided it can be produced cheaply, and of such a nature as to equal, if not to surpass, the best kinds of natural stone in the qualities that are valued by builders and architects. Another purpose to which the disintegrated slag is proposed to be applied is that of manuring, but as this does not come within the range of the *Mining Journal* to consider, I merely mention it. I have no doubt that Mr. Parry will readily afford any further information to those who may be interested in this subject. B. H. Paul.

8, *Gray's Inn-square, October* 18.

THE IMPROVED ATMOSPHERIC RAILWAY SYSTEM.

Sir,—I have read your report in the Journal of Oct. 8 on the new atmospheric railway invented by me, which is quite correct, and for which I am obliged to you. The faults of Samuda and Brunel's atmospheric railway are very numerous, a few of which I will now state, as it is these faults which my new atmospheric railway is intended to remedy and remove.

1. The continuous valve on the tube of Samuda and Brunel's atmospheric railway is a lifting-valve, or flap, of leather, and not a slide-valve of iron, as adopted by me. The evil of a lifting-valve is that it will not bear pressure interiorily, and could not be kept tight in all states of the atmosphere, with any possible appliances that could be adopted. The consequence was that no regularity as to the arrival or starting of trains, nor even stopping them, could be assured to the public. This difficulty is now entirely removed by my iron slide-valve, which will bear as much pressure interior or exterior as the tube itself. By means of forcing air at one end, and forming a vacuum at the other, any possible gradient may be ascended with perfect ease and safety. This will enable railway companies who use a rope for steep inclines to adopt a system which is not only inexpensive, but absolutely free from all risk or danger, whereas of all systems that of using a rope is most objectionable, as it is replete with risk.

2. The next fault of Samuda and Brunel's railway was the piston, which had a solid piston-head. If the conductor saw any danger upon the line he had no means of retarding the speed or stopping, except by brakes upon the carriages, which were ineffectual, as the piston was still at work, the vacuum being in front, therefore an accident was unavoidable. Upon my principle I have a piston with two heads, about 8 feet apart, and a valve in each, which the conductor can open and shut at his pleasure, regulating the speed; and he can stop, if necessary, at any point on the line by opening the valve in the front piston destroying the vacuum, and by opening the valve in the rear piston destroying the pressure. By this means he has full command of the propelling power.

3. Another fault in the old atmospheric railway was that the piston-arm, which was so fixed to the piston that all oscillation and jolting from bad roads or otherwise told upon the piston in the tube; also, the tube being laid upon the same sleepers as the rails, every jolt or oscillation of the carriages told upon the tube, which made it impossible to make joints that would keep tight for any length of time. By my principle the piston-arm is so attached to the piston-carriage that no oscillation nor jolting can affect the piston. By four rollers, two horizontal and two vertical, the two horizontal working across the two vertical, prevents any oscillation; and the two vertical working across the two horizontal prevents any jolting, and the tube being laid upon separate sleepers from the road, the oscillation or jolting of the carriages, or the repairing of the road, do not interfere with the tube.

4. Amongst the rest of faults upon Samuda and Brunel's line there was the shunting of trains from one line of rails to another, which had to be done with some other power than air. Either steam or horse-power had to be used, which was not only expensive but inconvenient, and caused great delay. This I obviate by shunting with the atmospheric piston; and to do this the tube branches off at the switches or points, and both the branch and the straight road tubes are lowered, so that the tops of the tubes are a few inches below the level of the rails, where the tubes and rails intersect; therefore there is only the thickness of the piston-arm to pass, which is ¾ of an inch. This I do by putting in an ordinary diamond crossing, and the verticle rollers in the piston are long enough to allow for the lowering of the tube, so with the piston. It is as easy and as quick to shunt as with the locomotive.

I have shown the working model of my invention to Mr. N. Ennor, who all along predicted the fall of Samuda and Brunel's atmospheric railway. I need scarcely say he approves of it very much, and promised to address you fully on the subject. Stephenson, in his report to the directors of the Devon Railway, said an atmospheric railway was impracticable; this I never believed, and now I am satisfied it is practicable, and has many advantages over the locomotive,—the first cost of laying down a new atmospheric railway will not be one-half of a locomotive line, as it does not require anything like the same area of land, nor quantities in cuttings and embankments, nor number of viaducts and bridges, nor yet half the weight of permanent rails, which are the chief items in making railways. Then the plant is nothing like so expensive for atmospheric railways as locomotive railways, for the cost of locomotive engines and tenders, engine-sheds or houses, workshops, &c., is far more than the cost of stationary engines and engine-houses for atmospheric railways, and the current expenses of locomotives is ten times that of stationary engines. Also the maintenance of a locomotive line will cost more than twice that of an atmospheric line, for it is the locomotive that knocks the line out of order and batters the rails to pieces, for the weight of a locomotive and tender is nearly half the weight of an ordinary train; but the locomotive does more damage to the road than a train ten times its weight would, as all the weight comes at once upon a short length. The atmospheric railway does away with this useless weight travelling on the line with every train, and it saves the road from this unnecessary burden, and the power it takes to propel it. Railway companies will, therefore, realise much larger dividends by adopting my railway, and one grand object will be attained—namely, the saving of life and limb, because there can be no collisions, nor can the piston carriage possibly leave the rails.

5. Another fault in Samuda and Brunel's system was having only one piston-head; the leverage upon the piston arm pressed the piston-head so tight to the tube in one place that it wore through the piston-ring in a very short journey, therefore causing very great leakage. My double-headed piston prevents this, as the leverage is equal. Each side of the piston-arm and the inner stay bar also prevent the pressure from leverage acting upon the piston-heads. I understand the directors of the Croydon line, before they gave up the atmospheric system, offered the sum of 20,000*l.* for a perfect valve. Had I seen an advertisement to that effect I should certainly have claimed the premium; and I mention this to show the importance of the invention. I may further mention that at a late meeting of the Metropolitan Underground Railway Company Mr. Malins stated it was his decided opinion that the line would never pay with locomotives, and he believed the atmospheric system, upon an improved principle, was the only way to make it pay. My new system of atmospheric railways is particularly suitable for the Metropolitan, and also for all towns and crowded localities, either above or below ground, as all smoke, steam, noise, and other nuisances inseparable from the use of locomotives will be removed. I have been given to understand that by the old system of atmospheric railways they could only run from station to station without stopping—that is to say, they had to stop at every station. I beg to state that by my system I can run any length without stopping—further than the locomotive, for I do not require either coke or water. This I do by valves in the tube, each side of a station. If the train has to stop, the valve in the front part of the station is kept shut; and it the train is not to stop, the valve is opened, and the train continues its journey without stopping. These valves are self-acting for through trains. James Halliwell.

2, *Queen-street-place, Cannon-street, London, E.C., Oct.* 22.

"LIMITED LIABILITY"—NEW COMPANIES.

Sir,—Could not a charge of "obtaining money under false pretences" be maintained against the directors of those joint-stock limited liability companies who wilfully mislead the public by recommending worthless speculations as of enormous value? The Limited Liability Act is undoubtedly calculated to be a very useful measure, but is, unfortunately, becoming a means for what may be called "legalised swindling." Undertakings have been entered upon, in some cases at least, with the avowed object, in case of failure, to get up a limited liability company to bear the loss. A very large proportion of the money in all such cases comes out of the pockets of those who generally have but little to lose, and the whole transaction has at times more the characteristics of a sharper's than of a gentleman's business. True, the men who are simple enough to subscribe to a limited liability company without ascertaining anything of the particular undertaking beyond the fact that it has a high-sounding directorate, and a very flattering prospectus, have been very properly spoken of as belonging to the same species as that peculiarly gifted and cunning bird which may well claim precedence in the art of hissing. But even geese demand our protection when they are surrounded by the unscrupulous, who are bent on stealing their very feathers; and, therefore, does it not become all who know what some of the limited liability concerns are so often got up for to protest against the cunning desception and trickery of men who can stoop to do anything for money?

Steps should be taken to get such an alteration of the Limited Liability Act as should compel every director to abide by the bargain he so strongly recommends, and under no circumstances whatever to part with any of his shares till everything the prospectus promised has been proved to be true. Many a man who now speculates heavily in this way would not care to be a director unless he could realise at once, and get clear before the bubble bursts. There are few things more needed than a National Association, founded for the sole object of watching these companies, and prosecuting to the utmost anyone who allowed his name or influence to be used in order to get up a company of this sort on a false or even an exaggerated prospectus. If a criminal conviction could be obtained against some of these notorious sinners in the modern art of sharping it might prevent many a poor man's savings going to fill the coffers of those who, we may hope, will some day be compelled to follow Sir John Dean Paul, and other illustrious "unfortunates" of our time, on their travels at their country's cost for that country's good. Such an association, if not likely to be very profitable, would undoubtedly be one of the most philanthropic movements of the day, as it would prevent, to a large extent, the frightful distress which will otherwise infallibly come—the result of reckless speculation on the one hand, and no less recklessly misplaced confidence on the other. It is high time to stop, if possible, the many games of "fox and geese" which are now being so extensively played in various parts of our land.

Oct. 19. X. Y. Z.

THE RIVAL CORNISH MINING MACHINES.

Sir,—Paradoxical as it may appear, when Mr. Crease publicly came forward, giving the result of the first trial of his machine to the public in the Journal, and so coolly to demolish everything connected with it, but the principle, tooth and nail, root and branch, it had the effect of giving me and many others confidence both in the man and the invention,—in the invention, that he had hit upon the right principle; and in the man, that he felt himself able to meet the necessities of the case. Since then I have never ceased to follow the fortunes of the machine with interest, and was only too pleased at having had the opportunity of inspecting it, and through your means publicly giving my opinion on the same.

I gave the description of the gear-work of Mr. Crease's boring-machine, and now add that of Mr. Green's, from a drawing shown me by the former gentleman. It consists of a single lever, one end of which is attached to the valve-rod, having its fulcrum on a bar connected with the machine. The opposite and longer end of this lever has a fork on it, which passes loosely over, and on the two sides of the piston-rod, on which are two solid rings, separate from each other by a space corresponding with the length of the stroke. This lever is moved forward and backward with every motion of the piston-rod, and, in my opinion, is a rattling, noisy, and shakey affair, which must, in consequence of its faulty principle, soon become useless. The difference between the two being as between efficiency and inefficiency.

I have read Mr. Green's claim to the invention of Mr. Crease's machine, and the latter's crushing reply, and being about to leave England for some time, I avail myself of this opportunity of stating my ideas on the subject, which I can the more freely do from my knowledge of the two. Mr. Crease's letter, to which I have referred above, was my first acquaintance with him, but I have become more intimate with him since my visit here. I found him precisely what his letter indicated, about as cool, cautious, and determined an individual as could have been met with, and perfectly capable of carrying out a project once entered upon. Mr. Green having the only available foundry in the neighbourhood was, so far, a necessity to Mr. Crease, and of the use he has endeavoured to make of a professional acquaintance I gather from their own opinion. That was evidently foreseen and provided for by Mr. Crease, in giving him permission to make a couple of machines, upon condition that he paid Mr. Crease the royalty on them. And now he appears to have found how much tether was attached to the end that was thrown to him.

There is a part of his letter which has not escaped my notice—that referring to Lord Kennaird, and a specification. Surely Mr. Green has not had the folly to endeavour to palm off on that nobleman what he terms an invention, but that which he made only with due authority and acknowledgement.—*Devonport, Oct.* 17. Josiah R. Armitage.

BORING-MACHINERY—ITS INVENTION.

Sir,—I was greatly astonished, and, no doubt, Mr. Crease was also, at the claim set up by Mr. Green, styling himself the inventor of the Boring-Machine. There is no one in the world, with the exception of Mr. Crease and myself, that knows the history of the invention of that machine. I believe Mr. Green himself would be surprised at the numberless sheets of drawings which I could show him, pourtraying different mechanical arrangements, purposed at one time to be used in its construction; these have, from time to time, been modified, altered, changed, discarded, and others substituted, as defects were discovered in them. The invention of this machine, as of every other, has not been the work of a day or of a month, but it has been the work of years. Mr. Green says he completed a machine previous to June, 1863, similar to the one described in the Journal of September 17, 1863. Now this, I am convinced, is wrong, because the machine there mentioned, as being exhibited at the Polytechnic, is entirely different from any other that has been constructed, as Mr. Green can very well see by the description given of it by Mr. Armitage. Again, Mr. Crease has, I believe, now in his possession a finished and a complete set of working drawings, executed in 1862, of a machine similar in construction to those Mr. Green made, but embodying many improvements; these drawings, on account of some further valuable improvements were never used, but new ones substituted. I have also in my possession drawings, embracing most of the mechanical arrangements in the original machine, and also comprising a host of others, which drawings were executed between two and three years before Mr. Green (or, indeed, anyone else besides Mr. Crease and myself) knew of the existence of such a thing. So much for dates. As I have before stated, Mr. Green does not know what has been done in the way of designing for that machine. Even the pillar and supporting bar, which Mr. Green supposed to be a new idea when first proposed to him, after seeing the defects of the former arrangement, is not at all new. Either Mr. Crease or myself have drawings somewhere of a somewhat similar construction, done as early as 1860, the principal difference being a square instead of a round bar, and I have no doubt Mr. Crease will recollect the occasion, and the cause assigned at the time for its not being tried.

This is an epoch in the history of this machine, parallels to which can be found in nine out of every ten new inventions. We all recollect the fight about the Coal-Cutting Machine, and anyone reading the *Engineer* has weekly evidences of the same thing. A man, after years of labour, invents a certain machine, and takes it to another to make for him; this second persons takes a screw, or a shaft, or some other trifling affair, out of one place and puts it in another, and immediately calls the whole thing his invention. Engineers should always recollect that if they design some trifling part of a machine for a person who employs them to do so, it does not follow that such design is their property, and if they intend when it is brought to perfection to claim it as their own, then they ought to refuse in the first instance to do it. When Mr. Green has had as much to do with designing new machinery as I have, he will then cease to claim any share in an invention which legally and morally belongs to another. In conclusion, I beg to say that I should not have troubled you with this letter, but that I considered Mr. Crease's statement would be, if possible, strengthened by being corroborated; and, at the same time, I shall anxiously look for the progress of the machine in your columns, and yet live in hopes of seeing it a really great success.—*Dolgelly, Oct.* 18. Henry G. Williams.

BORING-MACHINE—ITS INVENTION.

Sir,—In answer to Mr. Crease's letter, in last week's Journal, I shall refrain for the present bringing forward any more proofs respecting the invention of the Boring-Machine exhibited at the Royal Cornwall Polytechnic Society's late Exhibition, and content myself by asking that gentleman if he intends fulfilling his engagement, dated July 9, 1863, tion up to the time Mr. Crease purchased it from me on the above date. The ample proofs I shall bring forward will be sufficient to dispel any illusion Mr. Crease may effect to possess respecting my claim on the same. George Green.

Vigra and Clogau Mine, Oct. 20.

THE FORMATION OF GRANITE.

Sir,—I have been so much occupied during the last two or three weeks as to leave me no time to reply to the letter of "F. G. S." on the Formation of Granite, and now I have very little heart to do so, for your correspondent, whom I would treat with every respect, reasons so loosely, so inconclusively, and so contrary to the principles of science, that it is hardly worth while discussing the subject with him. It is, however, in itself an interesting subject, and in the hope that these letters will provoke independent enquiry on the part of your practical readers, I again claim your indulgence. Before noticing the chief points in the communication of "F. G. S.," I cannot refrain from condemning the practice of making statements extremely vague, and then calling them facts. "A few facts," says "F. G. S.," "proved by direct observations are of more value than volumes of speculation." And he then proceeds to say that crystals can only be produced from watery solutions, that all crystals contain water of crystallisation, and so forth. Now, Sir, these are mere statements, and unsupported either by abstract reasoning or by example are worthless in any scientific enquiry. It is important that we should understand what facts really are, and how to distinguish them from principles; and both facts and principles are very different from unsupported statements such as those made by "F. G. S."

1. "Crystals," says "F. G. S.," "especially those forming the ingredients of the granitic mass, can only be produced from watery solution." In this proposition two things are distinctly stated. First, that crystals can only be produced from watery solutions. Second, although that is true of crystals in general, it is specially true of the crystals in granite. I can scarcely think that "F. G. S." believes what he has said, for he must know that one of the most obvious properties of minerals is their crystallisation, either from solution or fusion. "The formation of crystals from a state of igneous fusion is in many respects analogous to what takes place when crystals are formed in water. It is simply the deposition of crystals from solution in a liquid that becomes solid at a high temperature, or the crystallisation of that liquid itself in the same manner as when crystals are deposited from solution in water, or water freezes." (Sorby on the "Microscopical Structure of Crystals." "Geological Journal," vol. xiv., p. 455.) "Crystallisation is a characteristic of all metals after fusion. The metals which are brittle are highly crystalline. Take for example antimony and bismuth—both are crystalline and brittle. But even this crystalline character is common to the soft and malleable metals, such as lead and tin, which, though when fractured do not present definite crystals, are distinctly crystalline." (Notes on Lectures by Dr. Percy at the Royal School of Mines. *Mining Journal*, October 15, 1864.) I could quote authority after authority filling many pages of the Journal, but why should I prove that which no man of science denies? Nor is it necessary that I should maintain my proposition with examples, showing from nature and actual experiment that minerals crystallise as freely from a state of fusion as from solution. I will, however, mention two simple, but not uninteresting, examples of crystallisation other than from solution. If melted sulphur be allowed to cool slowly, till a portion of it has become solid, and the still liquid portion be then poured out, the solidified portion will exhibit oblique rhombic prisms. When a prism of arragonite is heated it breaks up into a congeries of little rhombs of common calc-spar. Other instances will be given as I proceed. Then, as to the second point—the crystallisation of what "F. G. S." is pleased to call "the ingredients of the granitic mass," I will refer only to two arguments, although it would be easy to prove that granite is the result of fusion in many other ways. We know that calcite, or carbonate of lime, is soluble in carbonic acid gas, or in liquid acids; and, therefore, when we meet with a rock composed of crystalline particles of carbonate of lime, we conclude that it has once been dissolved in acidulous water, and deposited from that solution. The solid acid silica is also soluble in water containing carbonic acid gas, or some other substance; and also when in certain chemical states, and in water at a high temperature; we, therefore, conclude that the deposition of silica or quartz from an aqueous solution is possible. For the production of many silicates (as, for instance, the artificial silicates, porcelain, slag, and glass) great heat is necessary, and they are formed only during fusion. Most of the natural silicates are, however, practicably insoluble in water, or in any other fluid which is found abundantly in nature. When, then, we meet with rocks composed altogether of crystals, or crystalline particles of such silicates, we conclude that these rocks were once in a state of fusion from heat. (Juke's "Handbook of Geology," p. 50.) The second argument to which I shall now refer is based on the internal structure of granite. Quartz never forms in granite perfect crystals, whereas the felspathic ingredients frequently do so, and the micaceous not unfrequently. The felspars, orthoclase, albite, or oligoclase, were then solidified previously to the quartz, which is explained by a difference in the point of fusion and in the point of solidification in the minerals, and by the protracted viscosity of the quartz. (Baron Richtofen "Proceed. Imp. Geo. Inst., Vienna, in Geo. Journal," vol. x.) These are two methods by which we arrive at the igneous origin of granite, and did your space permit I would gladly enlarge on them, and also notice the other arguments to which I have alluded.

2. "F. G. S." asserts that all varieties of felspars, as well as other crystals, retain a certain proportion of water in a mineralogical combination in their formation." I am not a little surprised at this statement, which if "F. G. S." had consulted "Phillips's Mineralogy" he would not have made, for in the analyses of various minerals given in that standard work he will find that water is by no means essential to crystallisation. A very large proportion of the known crystalline minerals are absolutely anhydrous, and the silicates—idocrase, garnet, euclase, emerald, phenalite, zircon, and tourmaline, have no water in their crystallisation. I will not take advantage of the question whether HO is combined with the crystal as water, or simply as two elements in the proportion of 1 to 8, or of 2 to 16, which in chemical separation from the crystal is converted into water. If "F. G. S." refers to my last letter, he will see that I have proved that felspar contains no water of crystallisation, being, in fact, absolutely anhydrous. No one questions the fact, I cannot, therefore, understand what he means by asserting that "all varieties of felspar" contain a certain proportion of water. Bischof, a very high authority, distinctly states that "unaltered felspar contains no water." Phillips, too, gives the analyses of 31 specimens, not one of which contains any water. I subjoin analyses of four only:—

Silica	65·69	65·75	64·20	66·75
Alumina	17·97	18·69	18·40	17·30
Potash	13·99	14·17	16·95	12·00
Soda	1·01	1·44	Fe	1·75
Lime	1·34	—	—	1·25

3. "Quartz crystals," says "F. G. S.," when heated become opaque, in consequence of their being deprived of the water of crystallisation." This, like the others, is a wholly incorrect statement. Quartz contains no water of crystallisation, and, therefore, cannot lose any by increased temperature. I give the analyses of five specimens of quartz from "Phillips's Mineralogy":—

Silica	99·37	97·50	95·25	94·84	94·20
Alumina	traces	0·25	0·41	0·47	0·42
Red oxide of iron	—	0·50	(Fe 2·66	3·64)	3·08
Oxide manganese	—	0·25	Cu 1·00	—	—
Magnesia	—	—	0·67	H 1·04	0·73

Besides, assuming that quartz does become white by heating, it may be attributable to disaggregation, for it has been found that opacity is frequently the result of disaggregation, and the mass of altered mineral through a magnifier is seen to consist of small rudimentary crystals (Regnault). Phillips says before the blow-pipe quartz is infusible, exposed to the oxyhydrogen blow-pipe it melts, so that it may be drawn into fine threads, and is volatilised. And, by what is known as Reaumer's process, glass is rendered opalescent, by raising it to a temperature short of fusion.

4. "No crystal, and especially the six-sided prism with pyramidal termination, has ever been produced from molten glass without a mould." I hardly know what "F. G. S." means by this sentence; there is an ambiguity about the word glass. What is generally known as glass is not silica, but a silicate of soda, or potash and lime, and he may possibly quibble at a wider meaning. Assuming, however, that he means molten silica, I will show that its natural condition in cooling is crystalline. It cannot take any other than its true geometrical form, if freedom of action be given to its molecules. Sandberger describes augite crystals upon slags from an iron furnace. In fissures within the furnace brownish-grey prisms were found elongated in the direction of the principal axis." ("Poggend. Anal.," lxxxiii.) Fused silicon may be procured from a mixture of chloride of sodium with reduced silicon, obtained by igniting sodium in the vapour of chloride of silicon. The chloride of sodium becomes volatilised, and the silicon is fused into globules in the midst of the melted mass. These globules frequently show well-marked indications of crystallisation in forms belonging to the prismatic system, now and then in regular double six-sided pyramids. It may also be obtained in regular six-sided prisms, terminated by three-sided pyramids, derived from the octahedron, by exposing pure aluminium in porcelain trays, heated intensely in a porcelain tube to a current of the vapour of chloride of silicon; it can also be artificially produced in other ways. (Miller's "Elements of Chemistry," vol. ii., p. 222.) Having in a previous letter referred to this subject at some length, giving examples, especially from the lava of modern volcanoes, I shall without further proof accept the fact that prisms are formed, both artificially and naturally, from fused silica. Taking, then, glass in its more limited sense, I find that it is composed, in varying proportions, of the silicates of potash, soda, lime, baryta, magnesia, alumina, and oxide of lead. Now, the ingredients of this mixture are proportioned to gain certain purposes, such as ductility, transparency, hardness, and colour, and these purposes could not be realised if the substance were allowed to crystallise. In the manufacture of glass, means are taken to counteract the tendency to crystallise. It is utterly impossible for me to go into details on this subject, and I will, in conclusion, mention a curious fact, that, according to Laydolt's experiments, glass itself presents a crystallised character when corroded by a mixture of sulphuric and hydrofluoric acids, inasmuch as the crystallised portions are less easily acted upon than the amorphous portions. ("Comptes Rendus," vol. xxxiv., p. 565.)

I have occupied so much space in reply to these four propositions that I cannot go into the others, if, indeed, it were desirable. I must confess that I should have been glad of an opportunity of noticing Sir Charles Lyell's remarks on granite, and I intended doing so here, as a finish to these desultory letters, but having occupied all the room you will give me I dare not. And now, in conclusion, I must again express the deep regret and disappointment I feel that none of your more intelligent and scientific correspondents have entered into this controversy. As a poor, self-educated, hard-working, practical Welsh-

man, I have done my part, I now leave the subject, and shall decline to answer any further inquiries, but if anyone is disposed to discuss the question in a philosophical manner I will readily take part in it.

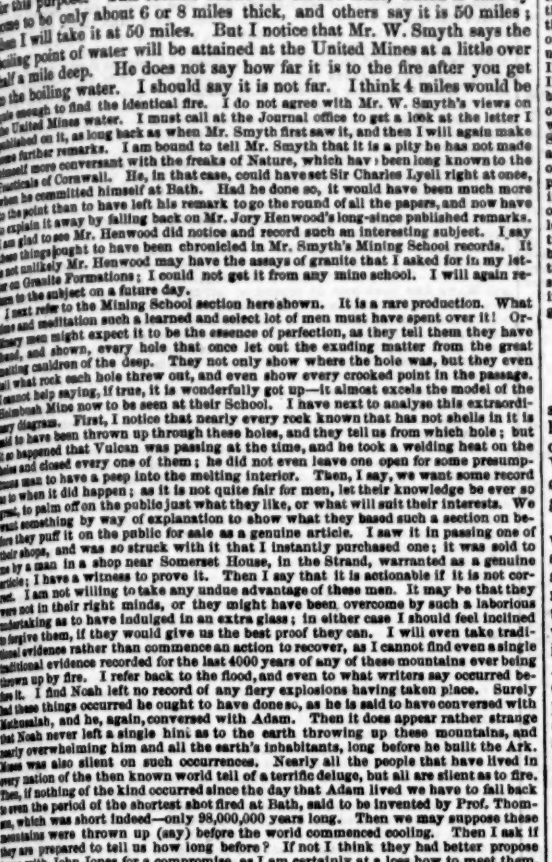
Ilkeston, Oct. 18. JOHN JONES.

MR. N. ENNOR'S VIEWS ON THE EARTH'S CRUST.

ENGLAND'S MINING SCHOOL—NO. XIV.

SIR,—In taking up the subject, as to the Globe being supported by interior fire, and every hill being formed of eruptive matter, I have to call attention to the diagram I have here given, which is a rough copy, or outline, of the one got up at the Jermyn-street School: it is quite sufficient for this purpose. This section shows the earth's crust, which is said by some to be only about 6 or 8 miles thick, and others say it is 50 miles; then I will take it at 50 miles. But I notice that Mr. W. Smyth says the boiling point of water will be attained at the United Mines at a little over half a mile deep. He does not say how far it is to the fire after you get to the boiling water. I should say it is not far. I think 4 miles would be quite enough to find the identical fire. I do not agree with Mr. W. Smyth's views on the United Mines water. I must call at the Journal office to get a look at the letter I published on it, as long back as when Mr. Smyth first saw it, and then I will again make some further remarks. I am bound to tell Mr. Smyth that it is a pity he has not made himself more conversant with the freaks of Nature, which have been long known to the Practicals of Cornwall. He, in that case, could have set Sir Charles Lyell right at once, when he committed himself at Bath. Had he done so, it would have been much more to the point than to have left his remark to go the round of all the papers, and now have to explain it away by falling back on Mr. Jory Henwood's long-since published remarks. I am glad to see Mr. Henwood did notice and record such an interesting subject. I say these things ought to have been chronicled in Mr. Smyth's Mining School records. It is not unlikely Mr. Henwood may have the assays of granite that I asked for in my letter on Granite Formations; I could not get it from any mine school. I will again return to the subject on a future day.

I next refer to the Mining School section here shown. It is a rare production. What time and meditation such a learned and select lot of men must have spent over it! Ordinary men might expect it to be the essence of perfection, as they tell them they have found, and shown, every hole that once let out the exuding matter from the great molten cauldron of the deep. They not only show where the hole was, but they even tell what rock each hole threw out, and even show every crooked point in the passage. I cannot help saying, if true, it is wonderfully got up—it almost excels the model of the Holmbush Mine now to be seen at their School. I have next to analyse this extraordinary diagram. First, I notice that nearly every rock known that has not shells in it is said to have been thrown up through these holes, and they tell us from which hole; but it so happened that Vulcan was passing at the time, and he took a welding heat on the holes and closed every one of them; he did not even leave one open for some presumptuous man to have a peep into the melting interior. Then, I say, we want some record as to when it did happen; as it is not quite fair for men, let their knowledge be ever so great, to palm off on the public just what they like, or what will suit their interests. We want something by way of explanation to show what they based such a section on before they puff it on the public for sale as a genuine article. I saw it in passing one of their shops, and was so struck with it that I instantly purchased one; it was sold to me by a man in a shop near Somerset House, in the Strand, warranted as a genuine article; I have a witness to prove it. Then I say that it is actionable if it is not correct. I am not willing to take any undue advantage of these men. It may be that they were not in their right minds, or they might have been overcome by such a laborious undertaking as to have indulged in an extra glass; in either case I should feel inclined to forgive them, if they would give us the best proof they can. I will even take traditional evidence rather than commence an action to recover, as I cannot find even a single traditional evidence recorded for the last 4000 years of any of these mountains ever being thrown up by fire. I refer back to the flood, and even to what writers say occurred before it. I find Noah left no record of any fiery explosions having taken place. Surely had these things occurred he ought to have done so, as he is said to have conversed with Methusalah, and he, again, conversed with Adam. Then it does appear rather strange that Noah never left a single hint as to the earth throwing up these mountains, and nearly overwhelming him and all the earth's inhabitants, long before he built the Ark. Moses was also silent on such occurrences. Nearly all the people that have lived in every nation of the then known world tell of a terrific deluge, but all are silent as to fire. Then, if nothing of the kind occurred since the day that Adam lived we have to fall back to even the period of the shortest shot fired at Bath, said to be invented by Prof. Thomson, which was short indeed—only 98,000,000 years long. Then we may suppose these mountains were thrown up (say) before the world commenced cooling. Then I ask if they are prepared to tell us how long before? If not I think they had better propose terms with John Jones for a compromise, as I am certainly at a loss how to meet them, their theory and section being such extraordinary ones. First, I say, granting that the holes were there leading from the earth's surface into the fiery interior, as a matter of course it must have been a liquid fire. Then we are bound to take into account the rotation of the earth, which is about 1000 miles per hour; then, with a globe travelling at that rate, I ask if all the substances of the same gravitation were not in an amalgamated mass? Then I very innocently ask them how one hole could possibly throw out granite and the next hornblende, the next trap, then porphyry, and the next basalt, when the time that this matter was passing over either hole could not be half a second? Surely they will not argue that a hollow globe rotating 1000 miles per hour could contain a liquid or a fiery fluid in a still position? If so I see no chance of a compromise; if I give them their own theory that the lighter portions of matter were outside, and passing over these holes the same substances must have passed out through every hole. In that case every hill should be the same until all of one matter was out, and then a second matter would come; to each and every hole, then, there would have been a change of rock. This was certainly an oversight of theirs. See how easily they could, with a little twisting by them, have accounted for all the different stratifications now found. It is here I take my stand on quite a different ground, and tell them that there are two forces acting on the earth. The centripetal acting from without, keeping everything on the earth; nothing will fly off the earth without some acting power, to overcome the resistance of the atmosphere. Tie lumps of lead with strings to the rim of an ordinary cart wheel, and let a man turn it with the speed of a grinding-stone, and all the balls of lead will fly off to the length of line, on the same principle as the two balls to a steam-engine. Then I take the hollow globe that is rotating 1000 miles per hour, and I contend that from the law of centrefugal force all the melted metals there, if any, would go off in the line of the ball, *a*, and continue to keep the line of the four, *a*. In that case all the holes should have let out melted metals, and our hills would have been all metallic substances in the place of granite and every known rock. I do not pretend for a moment that I am infallible, but I do say here is a field open for argument. Then I ask if my view of where the more ponderous portions of matter would be found is a correct and feasible theory, what would the centre be? Supposing there was a deficiency of matter within to fill it by the space from *o o*, where would that hollow space be? Would it be as I have shown, or in the centre out, around at the line of the four *a*. I know one thing, which is that all the most ponderous ore which man finds is nearest the earth's surface.



I next call attention to the lines put in as the earth's artery, or north and south lodes. You will notice these are at the angle of about 23½°; this would leave a void space of one-third of the earth, as I have shown, which is about the true law, as the average, that lodes are found to dip. Then, I will suppose all the holes as shown by England's most recent Mining School section to be correct. I ask them to show me, by sound and honest reasoning, how these holes they show could possibly pass out through the earth's crust, and thrown up millions of mountains, without destroying every lode in the earth. Then, I refer them to my section of last week, where it must be clear to every practical man, whether they be metallic or coal miners, that these volcanic holes, if they ever existed, must have destroyed every metallic vein, and also every coal bed; but in all my long practice I have never met with a single instance of such an occurrence; the lodes and coals are undisturbed, further than their shifts by faults, as shown in my section in No. 13. Without some proof from these men, to show these things have occurred and do occur, I cannot consent to a compromise, neither can I take a bribe; I am bound to fight the battle out. I have offered to take even well-grounded traditional evidence, in preference to the battle-field, but I cannot see how it is to be avoided; it must be fought out. If they will persist in firing long shots, I am bound to meet them with glaring facts. We certainly did stand aghast at the unexpected long shots fired at us at the Bath meeting, but I feel bound to tell them that the section of theirs, which I have shown here, is a farce, attempted to be palmed off on the public, and will only be accepted as a vague theory, and a disgrace to the conjectures and the age they live in. I may even say to many of the school-taught, you are uneducated men. No man should claim to be placed in the class commonly called educated men if he cannot, when called on, argue on the general basis of sound reasoning. A man that cannot do so I set down as an educated dupe. I find through the world that there are far more educated fools than wise men. The educated men of England are fast imbibing a notion that it is degrading for them to become men of business; they claim to move in a class they call gentlemen, where nine-tenths of them spend what their forefathers worked hard to get; the fact is, this class is becoming so plentiful that the middle and lower classes have to work hard to support them as England's drones. The very sight and idea of their small section of the earth's crust makes me shudder. Here is an earth, near 8000 miles in diameter, with a crust they say only 5, or at most 50, miles through, leaving nearly 40,000,000 square miles of its contents a liquid fire. I say, let your readers pause, and think, if such a mass of fire exists, would it not consume such a scanty crust before the fire-worshippers could say their prayers, and get through their breakfasts? It really puzzles me to discover where these men got their basis on which they could found such an ignorant and unfathomable theory. To me what they say is like moonshine. They perceive a shadow, but they can catch no substance to argue on. Here is a globe 24,000 miles round, covered with mountains; if we take one mountain in three miles, there would be 8000 in the circumference. I will not here attempt to calculate how many millions there are on the globe; but I do say that no two of them are of the same constituents, and these wiseacres say they were all poured out from the same melting-pot, when revolving at the rate of 1000 miles per hour. Then I call on them to solve these problems. First, let them tell us where they got their fire theory from, otherwise it cannot be passed by men that have had a practical training in the earth's crust. Are these men aware that rocks are conductors of heat, and that such a mass of fire would expel all water from the earth, with every evaporating substance, and have left the world a mere skeleton, that no living being could stand on? I will again ask these lost and erring fire-worshippers to give us some efficient evidence and proofs as to what they anchor their belief on. As to the world ever having passed through such a terrific and fiery ordeal, one positive proof is worth all the negatives in the world. It appears to me as though they took an aerial trip in a balloon, and then became lost in the clouds, where they met some supernatural beings. Did they reveal this wonderful history of the origin of the world to them? If so, they were very kind. Or did these men, to cover up their aerial errors, feel bound to prosecute some new theory as to the earth's origin? I fear the philosophy of these men, if not held in check, will sap the earth's foundation. I say the public has not yet received a shade of evidence from any past generations, either by tradition, philosophy, sound reasoning, or revelation, that the earth ever was a ball of fire for even a single day; then I contend that before these Bath men's revelations we were armed with fair reasons to conclude they were not true; but now I say to them—Show us why God was necessitated to burn the earth for 9,000,000 of years, and why a mass of fire is still required in the earth? Or will they argue that God was incapable of making it a finished structure, at once to place man on? As evidence or proof for support of their theory, I will even take good sound reasoning, preferring a few practical facts if they have them at hand, hoping they will not lay too much stress on education, title, or old romantic books, or even the expanding wings of Government, as we have long since learned that spiders have been allowed to weave their webs in imperial palaces, and owls to sing their night songs on their lofty towers. But I see no reason why they should not be made amenable to the public if they commit glaring acts of credulity; neither must they again fall back on their long shots. It will avail them nothing if they continue obstinate. I will do my best to plant the standard of common sense on the newly-invented iron walls, and bring up 1000-pounders charged with practical facts. In my next I shall give a diagram of Volcanic Mountains. ——— N. ENNOR.

NEW SYSTEM OF GEOLOGY—No. V.

CONCLUDING OBSERVATIONS.

SIR,—In these letters I have endeavoured to trace and indicate, as clearly as I can, the probable origin of all Nature, both animate and inanimate. I have found that originally the world was nothing but one mass of air, out of which not only the rocks have come, but also the plants and animals. When I speak of air, or the atmosphere, it must not be supposed that I speak only of the gases contained in air, but of the invisible fluids and forces which govern it as well.

METEOROLOGY, or the science of the atmosphere and weather, is a science which is literally in its infancy. This important and most comprehensive science has no literature worthy of the name, for all the materials of the science are the transactions of scientific societies, which have never been arranged or put into shape. The difficulties attending the science are certainly great, but everything of any value is difficult, and that is no reason why the science should be so much neglected. I lately attended a meeting of the Meteorological Society of London, at which Mr. James Glaisher, Admiral Fitzroy, Capt. Maury, and other celebrities were present. No end of tables and calculations were produced, but nothing approaching to philosophy was attempted. Mr. Glaisher confessed that he was as much at sea as to the causes of heat and cold, rain and fair weather, calms and storms, as when he began to study, 30 years ago. All that they had attained to was an endless array of isolated facts, no one having attempted to turn these facts to account, or to draw conclusions. Let me tell the meteorologists that they have already more facts than they can make use of, and that it is idle to think that they will be better able to philosophise after they have multiplied their facts. On the contrary, they will be in a worse position, for already they are overburdened with evidence. So long as are all collectors and no philosophers no progress in meteorology or any other science is possible. It must be remembered that when one important science is left behind, as is the case with meteorology, the other sciences will suffer. Each science is necessarily connected, in some degree, with every other science; for as all Nature is one, all the sciences are required truly to represent her.

Mr. N. Ennor makes the rocks to be formed out the water of the sea. Water contains every substance necessary for the formation of rocks, and in depositing these substances in obedience to the laws of chemistry and affinity the various descriptions of rocks are deposited at the bottom of the ocean. This is, so far true, and a great advance on the received opinions of geologists; but if Mr. Ennor had added that the sea had received, and is constantly receiving, its materials from the air he would have strengthened his position. Without this addition he will find it difficult to account for such vast masses of rock, composed of such a variety of materials, coming out of water. Pythagoras (B.C. 550) made everything out of water, and Mr. Ennor appears to do the same; but I have shown that to make everything out of air is the only theory of creation that will account for all phenomena.

It is clear that every Plant and Animal must have originated without seed, or there could be no plant or animal now existing. Why people should not see this, only shows that they do not think or reason, for if they did they would acknowledge that this must be so. Why people should doubt the power of Nature's laws to produce new organisms, as well as to sustain those already created, I never could understand; for an original creation is not more wonderful than upholding those already created. An idea exists that to discover God's methods of working out his purposes is impious, but the fact is quite the opposite; for we honour our Creator much more by the appreciation and discovery of his works than by shutting our eyes and remaining in darkness. Do not the heavens declare the glory of God, and the earth show forth His handiwork? Does not the day utter speech, and the night show wisdom? But if we will not look at either the heavens or the earth, except with the eyes of ignorance and scepticism, and if we will shut our ears to the utterances of the day and the night, we shall neither honour nor glorify our Maker, which, we are told, is the chief end of man.

I hold that each species of animals has been originally produced in the air by electricity. All at once the land is covered with Locusts. At another time a shower of Toads; at another a shower of Fish. On examining the toads which fell at Windsor lately, it was found that they fell in balls the size of a small musket-ball, and on opening them they were declared to be live frogs. These balls open and expand, and an animal capable of growth, and reproducing itself, is set at large. Seeing that new creations of inferior animals are going on in the present day, it is only reasonable to infer that the superior animals now existing were all created and sent down on the earth in a similar way to that I have mentioned. It is not more difficult to create Mammals than Fish, Insects, and Reptiles; and seeing that the laws of Nature can perform the one operation, there is no reason to doubt the possibility of the other. We know that in the Geological Periods the conditions of the Earth were much more favourable for the creation of superior animals than now; and that fact, in all probability, furnishes the reasons why such superior creations have ceased.

That plants and animals have undergone physical changes upon the development theory of the "Vestiges of Creation" I do not believe, for there is a total want of evidence in its favour. Look at the mummy animals and men of Egypt, and you will find them precisely the same as the animals and men now living, and the same may be said of the seeds of plants which have been found with the mummies. Open soil in a new country, and you will find plants grow up without seed, which are precisely the same as the plants of our own fields. This shows that time has made no alteration in plants. In Australia clover, thistles, and nettles were unknown till after its colonisation, and these new plants are the same as our old ones. Of those who object to my theory of creation I ask, how do they suppose God did create man and the superior animals? Did the Almighty send down full grown men and animals, a single pair of each, from which all lands were peopled? If this were so it would be much more difficult to account for their being able to live than to suppose that they were originally sent down in an embryo state, as I have supposed. Lyell places the origin of man at least 100,000 years back, so that the account of Adam's birth cannot be taken as the origin of all races, but only of one race or family.

We cannot say how the germs of animals are created in the air, any more than we can tell how the acorn should grow into a stately oak, or the child be born in the womb; but because we cannot know these things that is no reason why we may not discover the method by which the creation of all existing species was effected; and when we see creations going on in the present day, it is only fair to infer that those of past ages have been brought about in a similar manner.

Until our geologists take up the question of the origin of rocks they cannot materially advance the science. Geology will remain a battle field of opinions in which no two men agree, and until naturalists settle the question of spontaneous creations no progress towards harmony of opinion can be made in natural history. The keystone of the arch is wanting, and until that is supplied science will continue to be in a state more or less chaotic.—72, *Sloane-street, Chelsea, Oct.* 19. A. ALISON.

MINING IN CARMARTHENSHIRE—LLWYNCALENIG MINE.

SIR,—It seems very strange that those men who profess to have so much knowledge of geology and mineralogy do not, before making such sweeping assertions and condemnations as "H." did in last week's Journal, take a little trouble to collect facts, and then adhere to them. After condemning the whole of the Llanpumpsaint district, and stating there was not a mine working at a profit, except the Vale of Towy, within a radius of 20 miles, taking Taibach as the centre (which would be 40 miles from north to south, and 40 miles from east to west—a very bold assertion and sweeping condemnation), and that every trial in that piece of country has ended disastrously with the abandonment of the works. I would ask where is the Llanfynach Mine, now returning 40 tons of lead per month, which must be paying good profits; and the Trelech Mines, not yet abandoned, which sold nearly 11,000*l.* of lead, and which will, no doubt, make a profitable mine when properly opened out. Neither of these mines is 15 miles from Taibach. "H." goes on to say that "as I write I am creditably informed that the Llwyncalenig Mine has just been stopped, the men having been paid off last week by Messrs. Knight and Manders, the lessees." From this your readers would infer that there were no funds, or that the indications were so unfavourable that these gentlemen had determined to abandon the works; but such is not the case, and if "H." had taken the pains to enquire he would have found that the present temporary suspension is not from want of funds or promising indications, but through circumstances which the lessees expect to arrange in a very short time, when operations will be resumed by the same gentlemen. "H." further says that the whole of the rock in this district is nothing but shale. In this I differ from him. Having had thirty-five years' practical experience in mining, and in almost every kind of rock in the kingdom, I do not hesitate to affirm that the whole of the high ground in the Llwyncalenig estate is a compact clay-slate formation. The lode on which the adit level is driven is from 2½ to 3 feet wide, bearing a little to the east of south and west of north, and underlying east 3 ft. in a fathom, the component parts of which are everthing a practical miner would wish to see at the depth, from 6 to 7 fms. from surface. There are also several east and west lodes in the sett, which, so far as seen, have a very promising appearance. Then, if these lodes are traversing a congenial clay-slate rock, why might not they be found productive there as well as at the Vale of Towy, both mines having a run of shale to the north, acting as a dam to the mineral? and I do not think that the dam of the Vale of Towy has all the mineral on its south side. Neither has all the mineral to the north of the Vale of Towy leaped over the dam into the Vale of Towy sett. By what I can gather from the letter of "H.," I infer that he has not thoroughly inspected the district, or ever seen the workings or rock at the Llwyncalenig Mine; but he has trusted too much to, and drawn his conclusions from, hearsay and the "Memoirs of the Geological Survey of South Wales." I enclose my card, and beg to state that if "H." will meet me on the spot I will point out to him where the clay-slate divides from the soft dark shale to the north; and I think he would be soon convinced of his error by— A PRACTICAL MINER.

Oct. 18.

CARMARTHEN MINERAL DEPOSITS—TAIBACH MINE.

SIR,—Having perused with some interest the correspondence relative to the Taibach mineral sett, I beg to forward you the following, which may perhaps help to soften asperites, by in some degree elucidating the interesting subject of mineral veins, or "lodes." In a little work on mining, entitled "Britain's Metal Mines," by Mr. J. R. Pike, it is stated at chap. ii., p. 10, as follows:—"The minerals of copper, lead, and tin are usually found in the granite and clay-slate formations, and the lodes or veins are usually found most productive in the vicinity of dykes of porphyry and metamorphic rocks. The former are called in Cornwall and the West of England elvan courses, and they usually have the same course or magnetic direction as the metalliferous veins or lodes. Veins are divided into two classes, metalliferous and non-metalliferous; the former are denominated 'lodes,' and the latter 'cross-courses,' which intersect the lodes, and exercise an undoubted influence over their productiveness." The writer then goes on with observations on the variation in the magnetic bearing of different lodes, and then adds, "But if we state the course of what the Cornish men call 'right running veins,' as east and west, within reasonable limits of variation, it will suffice for all practical purposes. To promulgate any dictum respecting the precise character of the stratum, as regards the quantitative value of its constituents, and its exact relation to adjacent strata, with the view of determining the value of lodes under varying conditions, is, to say the least, a very hazardous experiment, and is only tolerable when coming from a person of position and authority, and even then should be treated more in the light of instructive memoranda." In p. 36, the writer sums up Chap. iv. thus:—"A careful perusal of this chapter must convince the reader that much remains to be done in the way of exploration for metallic minerals in the United Kingdom, and although the number of mines in full work is unquestionably large, yet to our mind the conviction is irresistible that the copper, lead, and tin mines of England, Scotland, and Ireland can only be viewed as indicative of localities, and not affording even an approximately true exhibition of the metalliferous capabilities of this country."

Now, taking the same view of this subject as the learned writer, and the seeming admission, even on the part of the opponents to the Taibach sett, of the fact of the "lodes" traversing the clay-slate rock of the country, with a bearing of what the Cornish men designate as "right running veins," what, in the face of these stubborn facts, becomes of the oft-repeated, though to me meaningless, phrase, outside the "metalliferous range?" In the whole of Mr. Pike's little work, which I think will well repay the perusal, we do not hear one single allusion to this seeming pet, but utter meaningless (when the facts are against such a theory), phrase. And before I conclude, in strict justice to Mr. or Capt. Dingle, I cannot do better than give your readers a further quotation from the same valuable little text book of mining:—"The qualifications necessary to enable any individual either to select the ground or direct the operations of a mine where metallic minerals are the object of search are of a very varied character. The teaching of the laboratory and the museum can never qualify the pupil for a miner without a considerable fund of practical experience, only to be acquired by years of careful observation and comparative reasoning. In a matter of this kind, theory without practice may be taken as synonymous with incompetence." I naturally pause here, though the author does not, to enquire whether the writers, "H." and "J. A. T.," are practicals or not? This question, in all fairness, is, as I believe your readers will agree with me, only what is just and right towards Mr. E. H. Dingle, with 30 years' practical experience to back him; and surely, as he has had the opportunity of seeing the sett in question, as he states, truthfully reported on it through the Journal, your readers cannot in justice accept the report of Captain Waters, of the Vale of Towy Mines, who has never been, according to his own statement, within four miles of the sett, in preference to that of Capt. E. H. Dingle, who took the trouble, at his own cost, to come all the way from London to inspect this mineral property, and judge for himself as to its value and natural capabilities for development. Such a course would be utterly absurd on the very face of it, and could but lead to one result—the propagation of error and the abandonment of truth.

And for the sake of truth I am here compelled to state that the writer, "H.," is totally wrong in his statement that the Taibach sett is in a stratum of shale, for having myself frequently visited the mine, I feel morally bound to state that the shallow adit level is driven through a compact clay-slate rock or killas. "H." also states that the "lodes" are barren. The very admittance of the term "lodes" should have taught him the contrary; but irrespective of this, when the necessary indications of every good mine, such as good gossan backs, carbonate of lime, prian, with spots of mundic, copper, and lead ores are produced therefrom, what, let me ask, becomes of the charge of barrenness, and what possible good can ultimately result from reckless and random assertions of this description, opposed as they are to common sense and reason, and to facts which can both be seen and handled? I am truly sorry to find so much of the cloven foot, in the shape of personality towards the injured and ill-used proprietor, and the kind local contributors who assisted him. I hope that the next production from "H.'s" pen will be more in unison with his own recommendation to the proprietor, which for the present he appears to have totally lost sight of—to "eschew personalities." And in conclusion, let me beg him to bear in mind that truth will ultimately and surely prevail, to the exclusion of crude notions and presumptuous pretensions.

Carmarthen, Oct. 18. ——— A LEGITIMATE SPECULATOR.

CARMARTHEN MINERAL DEPOSITS—TAIBACH MINE.

SIR,—As one of the so-dubbed "doughty local contributors," and assumed "burnt children," in the last communication of your correspondent, "H." I beg to state that such is my faith in the integrity of the abused Taibach sett, that I should be only too happy to allow my quota of the said contribution to remain in the said mine, towards its complete and full development; and provided a company can be got up (as I consider it is too early as yet to cry out), be also glad to again further add towards this speculative and legitimate undertaking, because I feel convinced, from the opinions of mining men with whom I have visited and inspected the sett, that it is, as a venture, everything that can, with anything like a speculative spirit, be truly confided in, and feel convinced that I do not stand alone in this responsive feeling. W. H.

Carmarthen, Oct. 18. ———

MINING IN CARMARTHENSHIRE—TAIBACH MINE.

SIR,—This discussion, refering to the Taibach Mine, in the Journal gives great interest and pleasure to your country subscribers, and we admire your liberality in allowing space for so long a period, and we are fully aware that you will continue to do so as long as the correspondence is of any interest to the mining world. I have read with great carefulness the correspondence up to the 15th inst., and it strikes me very forcibly that there is a vast amount of boldness and truth on the one side, and on the other a great wavering of truth, mysterious changes of opinions, and promises, and even threats. First, the writers for justice and truth are, in my opinion, "Veritas," "Welshman, No. 1," "Welshman, No. 2," "Observer," and "W. G. S. T." Why I so positively assert that the names I have mentioned are the writers of justice and truth, I ask any reader of the Journal if they have seen any wavering from the subject they first introduced in the field of discussion? They have brought positive facts before the mining world, and a fair challenge has been given Capt. Waters by Mr. Dingle, who I admire for coming forward, and signing his name to the statement he has made. This is what I call a bold step on the side of justice and truth. Another act of justice and truth is by the ten doughty friends (not shareholders) of the proprietor, who signed a precious document full of truth, which sets aside the paltry threats of the person who so meanly made use of such language, thinking to intimidate justice and truth. It is very true what "Welshman" stated in one of his letters, that it would require a more talented writer than "H." to set aside that word "Truth." "H." being on a tour, said he would in a short time produce some articles on mining in Carmarthenshire, also, if the controversy ceased, he hoped to be able to prove it was in the metalliferous range; but "H." was like a snail crawling out of its shell, until he saw that his promises did not in the slightest stop the controversy, the bold writers of justice and truth not caring for "H.'s" hot and cold reports; and what is the result? Why, "H." even bursts his shell, although quite a disinterested person, and, finding his dictation was laughed at, defends Capt. Waters, and says he is quite right in what he has asserted. Because the defenders of justice and truth did not cease the controversy at the dictation of "H.," he states that the Taibach Mine is out of the metalliferous range. In my opinion, "H." is like a vane on a steeple. I do not intend going into all "H.'s" writings, for I leave others to do so, who will have quite enough to say to "H." on classical mining. I will state sufficient to prove my assertion that "H." does not adhere to facts. Did he not say he could prove the ten doughty friends withdrew from the Taibach Mine, because they were not satisfied with the results? Those ten signatories make "H." appear very little, in my opinion; so much so that I would not place any reliance on whatever he might write or state. I consider "H." has added insult to injury. I do not hesitate in saying that those ten gentlemen will treat "H.'s" language with the contempt it deserves. I also strongly advise Mr. Dingle not to take any notice of "H.'s" letters until he has the courage to sign his name to his statement, Mr. Dingle having set him the example when he challenged his friend, Capt. Waters; and the person, I say, who picks up the gauntlet let him do the same. I do trust when he signs his name he will adopt for his motto in discussion, "Justice and Truth."—*Oct.* 18. A. M. M.

Meetings of Mining Companies.

WEST CANADA MINING COMPANY.

A general meeting of shareholders was held at the company's offices, Queen-street-place, on Thursday,—Mr. W. Gladstone in the chair.

The Secretary having read the notice convening the meeting, the subjoined report of the directors was then submitted:—

The manager's circular, issued with the notice convening this meeting, will have apprised the shareholders that the property in Canada, which has just been purchased by the directors for the sum of $100,000, is that which is know as the Bruce or Cuthbertson Location, and that it comprises the Wellington Mine, which has heretofore been worked on lease by this company. The principal reasons which have induced the directors to acquire the same are also set forth in the said circular, and it may now, therefore, be only necessary to add that the directors fully concur with the managers in believing that the prospects of permanent prosperity of this company are much enhanced by the acquisition of this property, consisting of 6400 acres of land, with all its mineral rights in fee simple, thus avoiding all payments for royalty, and all questions involved in the clauses and covenants of a leasehold tenure.

By the provisions of the contract entered into with the vendors—the Montreal Mining Company—on Sept. 9 last, the terms of payment of the purchase-money were stipulated to be as follows:—$20,000 in cash on signing of such contract, $20,000 by bill at three months from Sept. 1, $20,000 by bill at six months from Sept. 1, $20,000 by bill at nine months from Sept. 1, and $20,000 by bill at twelve months from Sept. 1—total, $100,000, or about 20,000*l.* sterling, with interest at 7 per cent. per annum, for the bills until paid. In order to meet the payments thus agreed to be made it will be necessary, as has already been intimated, to increase the capital of the company, and this the directors recommend should be done by the issue of 20,000 new shares of 1*l.* each, such shares to be offered to the shareholders rateably to their present holding—that is to say, one new share to be allotted for each old share at present held, and in the event of any such new shares not being so taken up, the directors propose that they be authorised to dispose of the same as they may deem best for the interests of the company. It is intended to call up the capital on such new shares by two equal instalments, the first to be made payable on Dec. 1 next, and the second on March 1 next, which will enable the directors, if they see fit, to retire the bills that will exist at the latter date on account of the purchase-money. It is hoped that this arrangement will meet with the approval of the shareholders. The dividends which may be declared by the company will be payable on the new shares only when they are fully paid up.

The directors take this opportunity of stating that the raisings of ore from the Wellington and Copper Bay Mines during the present year have been well maintained, and promise to be nearly equal to the quantity obtained during the previous 12 months. The operations connected with the dressing of the same have, however, been interfered with during the past few months by a long-continued drought, and this will, of necessity, make the shipments from the mines less than they would otherwise have been.

The shareholders will regret to hear that a fire occurred on the company's property in the month of July last, and that about 130 dwelling-houses were consumed, rendering many families houseless for a time. Every assistance was rendered to them by the company's agents, and the work of building fresh habitations is being rapidly carried on, so that all will be sheltered before the winter sets in. As the mining machinery was fortunately not damaged, the loss sustained by this company will be covered by a few hundred pounds, and this the directors hope to recover from the office in which the property was insured.

The Chairman said that they had heard the report read, and would have noticed that what they had so long anticipated had come to pass—they had secured the freehold of the Wellington and Bruce Mines. If they had not done so in two and a half years their lease would have lapsed. They would thus have sacrificed their many years of patient hard work, and lost much of their advantages from the machinery which they had erected. The directors thought that it was a pity to lose the opportunity, and they thought they had secured them upon fair terms, whilst they estimated there would be a total nett gain (by saving royalties, rentals, &c.) of 2800*l.* a-year. The opinion of the Messrs. Taylor was that the Bruce Mine could be worked as well as the Wellington. They thought it was a most admirable property, and by securing it they had made a permanent arrangement for them. Capt. Plummer had reported very satisfactorily as to the purchase, and he thinks that they would have been acting very unwisely had they failed to secure it. As the machinery was worth about 8500*l.*, they only really had to pay about 12,000*l.* for the mines. The purchase would add much to the general wealth of the property. He thought they had made an excellent bargain for the shareholders, and he hoped they would approve of it. With regard to the new shares, it was proposed to issue them *pro rata*, to call 10s. in a month, and the remaining 10s. about March next. As to the mines, they had received a very satisfactory report that day. They hoped to declare a dividend at the end of the year.

The Solicitor then submitted the formal resolution, observing that the directors had requested him to draw it up, that no legal difficulties might afterwards arise. It was to the effect that 20,000 additional shares should be created, such shares to be issued *pro rata* (one for one) to the existing shareholders, and that all shares not taken by them should be disposed of as the directors might think proper.

Mr. J. Phillips presumed that the present mode of raising the additional capital had been well considered by the directors. It would largely augment the number of the shares, and it would, therefore, be well to consider whether some other mode could not be suggested. It was, no doubt, a very simple plan, and as to the desirability of purchasing the property two opinions could not exist. Their shares at present stood at about 3*l.* in the market, and the question was whether the advantage of this could not be secured by the company, that those who were unable or unwilling to take their *pro rata* allotment might not be prejudiced.

The Chairman did not see that anyone could be prejudiced by the arrangement proposed, inasmuch as anyone entitled to the shares could take the new issue at par, and sell a portion of their present holding at the premium, thus obtaining the advantage of the arrangement without lessening their interest in the undertaking.——Mr. R. M'Callan quite agreed with the equity of the proposition put forward by the directors.

The Solicitor believed that the issue of the new shares would not materially lessen the premium which the individual shares would bear in the market, and thought that they should proceed upon the assumption that every shareholder would take the shares to which he was entitled, as no doubt most of them would do so.

Mr. John Taylor said that at first it struck him that they were adopting a mode which was not the most desirable. Its main recommendation was its extreme simplicity; and he did not now think there was any objection to it, as there could be no doubt that anyone could regulate the amount of additional interest they would take by selling a portion. He had had an opportunity the previous day of examining the agent, who was there for years, and they were thoroughly satisfied with the result. In mining there was nothing like having a freehold, as that was the only thoroughly effective way of getting rid of the difficulties in connection with covenants of leases made. In the Wellington alone they had a good property, and when the Copper Bay was added it was better. Now they were adding the Bruce, which was on parallel lodes, and calculated to add very much to the value of the property. There were lodes extending, for example, towards a swamp, which was, in fact, a *terra incognita*, as it had never been touched, although it would, probably, be found well worth working. They should remember, too, that the expenses of management would not increase in anything like the same proportion as the scale of operations. He could not but think that they would benefit very materially by the purchase.

The resolution was then unanimously carried, and the usual complimentary votes terminated the proceedings.

LONG RAKE MINING COMPANY.

A general meeting of shareholders was held at the offices of the company, Broad-street-buildings, on Monday,—Mr. R. Hallett in the chair.

Mr. Dunsford (the secretary) read the notice convening the meeting, and the minutes of the last were approved. A statement of accounts for three months, ending with costs for September, showed:—

Balance last audit	£	153	3	9
Mine cost (July to September)		1273	4	10
Merchants' bills		188	9	1
Dues		60	0	0
Interest, &c.		29	12	1= £1704 9 9
Sale of lead ore				1111 17 6
Leaving debit balance				£ 592 12 3

The report of the agent was read, as follows:—

Oct. 15.—I am pleased to be able to report more favourably of the prospects of this mine than at any time since its commencement. The engine-shaft, sinking below the 80, is about 7 fms. below that level; the first 5 fms. were sunk through a lode worth 1 ton per fathom. In the present bottom it is rather small, but still producing ore, and to all appearance will shortly improve for lead; the ground is become very easy for sinking, consequently the shaft will be down to the 90 by the end of the year, when those levels will be driven out in the ore ground with as little delay as possible. The 80 west has just reached a run of lead, the present value of which is ¼ ton to the fathom, and improving for lead ore as we drive. In the 80 east the lode is 2½ ft. wide, worth ½ ton per fathom; driving by eight men, at 4*l.* per fathom. A stope behind this end, let at 30s. per fathom to four men, will produce 15 cwts. per fm. The middle shaft is holed to the 70, and the skip-road will be completed for drawing stuff from that level in a day or two; this will be a great convenience for working, as all the stuff previously had to be wheeled to the engine-shaft, a distance of 90 fathoms. A stope immediately west of this shaft, in roof of this level, is let to eight men, at 30s. per fathom, and will produce 12 cwts. per fathom. The 70, which is about 10 fms. east of the above shaft, is driving in a lode over 6 ft. wide, worth 1 ton per fm., and the whole length driven will average about the same value for lead ore; eight men are engaged there driving, at 4*l.* per fm. The 60 fm. level east will produce at present about 2 tons per fm.; driving by six men, at 3*l.* 15s. per fathom. A stope behind this end, working by eight men, producing 10 to 12 cwts., is let at 45s. per fm. Another stope west, let to two men, at 40s. per fm., will produce ¼ ton to the fathom. The foregoing comprise the different bargains of the mine. You cannot fail to notice the improved value of the lode as the mine becomes developed eastward, particularly in the last two months, and should the improvement continue, of which there is every probability, the returns in future will be considerably increased. We calculate on selling 90 tons of lead for the coming quarter, at an expense of about 430*l.* per month. The reserves of ore in the mine are worth about 5000*l.*, and should the eastern portion of the mine continue to improve, as I before remarked, increased sales may be expected, and, consequently, a good paying mine established. The mine is well supplied with machinery, and in excellent working condition, employing altogether about 80 hands.—F. Evans.

The Chairman congratulated the shareholders upon the generally improved position and prospects of the mine.——Mr. R. Hawke enquired if the returns were meeting the costs?—Mr. W. Michell said that the costs were now about being met by the returns.

Capt. Evans, replying to a question, stated that the mine was never in such a position as at the present time. Everything went to prove the correctness of the opinion originally formed, that something important would be found going eastward, the lode in that direction being much larger, and the ground much easier.

Mr. Michell said that he went underground on Saturday last, and he could safely say he never saw the mine looking half so well as at the present time. As regards the lode in the shaft, although at present small, it looked very kindly, and would, no doubt, soon open out satisfactorily.

The Secretary drew attention to the fact that the lode had steadily improved in depth.

Capt. Evans said that the 80 was coming on, and presented the most favourable indications. As regards the reserves, he could safely state that they were being increased fully 20 tons per month. He estimated they could be taken away at 5*s.* in 1*l.* He might further mention that the mine was provided with two good engines, which were provided with new boilers, and a skip-road had been placed to the bottom of the shafts.

Mr. Michell said that the mine had not only been laid out in the best possible manner, but it was being worked as economically as would be consistent with efficiency.

Capt. Evans, replying to a question, stated that they were at present laying open about 50 tons of lead ore per month, but they were taking away not more than 25 to 30 tons, and they were leaving untouched the best ground.

Capt. Evans said they would do better than that if the ends continued as they were at the present time.——The Secretary, replying to a question, stated that the monthly cost, including merchants' bills, was about 420*l.* or 430*l.*

Capt. Evans said that the extent of the sett was between 1¼ and 2 miles.

The accounts were passed and allowed, and the report was ordered to be entered on the minutes.——After some discussion, with regard to the financial position of the company, a call of 10*s.* per share was unanimously agreed upon.

A Shareholder enquired what course it was proposed to take with respect to those shares which were in arrears of call?—The Secretary replied that by the rules of the company shares upon which the call had not been paid within 30 days of the notice of the call having been made became absolutely forfeited, power being vested in a general meeting to dispose of such shares in such manner as may be judged best for the interest of the company.——It was agreed that all such shares should be sold by public auction, unless the arrears be paid within 14 days.

The committee of management were re-elected. A vote of thanks to the Chairman terminated the proceedings.

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

Melbourne, Aug. 25.—The yields of the gold fields had at the last dates been uniformly encouraging. The quartz mines of Ballarat, Sandhurst, and Daylesford, together with those of the intermediate neighbourhoods, have turned out remarkably well, a largely increased quantity of gold being obtained for the month in several instances. On most of the gold fields there was a good supply of water, and alluvial operations had received an impetus from this circumstance. From the statistical summary appended to the mining surveyors' reports for the quarter ending June 30, it appears that the average number of miners employed on the gold fields was 82,779, of whom 44,802 Europeans and 22,803 Chinese were alluvial miners, and 15,190 Europeans and 4 Chinese were quartz-reefers. The quantity of gold produced by them during the half-year was 759,461 ozs.; and valuing this at 4*l.* per oz., we have as the average weekly earnings of each man 28*s.* 1*d.* The average number of miners engaged on the gold fields during 1862 was 97,942, and the produce of their industry was 1,702,460 ozs. of gold, which gave to each man an average weekly wage of 1*l.* 6*s.* 9*d.* During 1863 the average number of miners employed was 92,292, and the amount of gold produced was 1,578,079 ozs., giving to each miner a fraction over 1*l.* 6*s.* 3*d.* per week. It consequently appears that, although there has been a falling off in the gross yield of the first six months of the present year, as compared with the average yield for the whole of 1863, of 29,578 ozs., yet that, as a fewer number of men have been engaged in its production, there has been a positive increase in the earnings of the miners to the extent of 1*s.* 10*d.* per man per week. "So far (says the Melbourne *Argus*) these statistics are of an encouraging character, for they show that, proportionately at least, there has been no falling off, but, on the contrary, a slight increase, in the yield of our mines during the present year; and that, if there has been a slight reduction in the gross quantity of gold produced, it is entirely owing to the fact that a considerable number of men have abandoned mining for other and (let us hope) more profitable pursuits."

Wood's Point reefs are still yielding largely, but, although we often hear of the large dividends received by shareholders in town, the actual returns obtained from the stone crushed are seldom made public. On the older reefs very high yields have been the exception of late; an increase of crushing power making up for the declining average yield from the quartz. Still, large cakes of amalgamated gold are occasionally turned out from the mills—alot of stone from the oft-named March Reef, at Inglewood, having lately produced one of 512 ozs. 12 dwts. Another, weighing 556 ozs., was only obtained at Pleasant Creek, the produce of 283 tons of stone out of a claim on the Cross Reef, and some smaller parcels of stone out of Sloane's Reef, at the same place, have averaged from 3 ozs. to 10 ozs. to the ton. The lately-found rich veins in different reefs at Tarrangower have also been yielding stone highly suggestive of the old times in this district, and the first ton from a new reef, found at Creswick three or four weeks since, produced 61 ozs. 5 dwts. During the last month the Port Phillip Company at Clunes crushed 4175 tons of stone for the Clunes Company, with a yield of 1406 ozs. 16 dwts., or on an average of 6 dwts. 17 grs. to the ton. Of all the deep-lead companies at Ballarat, the Band of Hope has lately been getting the largest returns, having washed out 1472 ozs. in one week; but, as the debts incurred before gold was struck have to be paid off, only a small portion of this has been devoted to the payment of dividends. The Buninyong Company has been paying the largest dividends during the month—40*l.* per share for each of the two fortnights—while the Koh-i-Noor Company paid 32*l.* per share for one fortnight, and 38*l.* per share for the other. The Great Extended Company has paid little in the way of dividends for some weeks past, the men being paincipally engaged in trying a new reef found in their claim.

AUSTRALIAN MINES.

Kapunda.—Aug. 26: All was progressing satisfactorily. The quantity of ores raised in June was 289 tons, of 17¾ per cent. average produce, equal to 52¼ tons of pure copper, exclusive of 50 tons of sulphur ores for flux. The quantity raised in July was estimated at about 275 tons of good percentage. Forty-nine tons of copper were waiting shipment at Melbourne; 45 tons were shipped per *Coonallo*, Adelaide, to London.

Yudanamutana Copper.—The superintendent (August 26) states:—"Owing to the continuance of the disease which broke out some time since amongst the working bullocks, coupled with the drought, the difficulty of cartage from the mines still prevails. I am, however, using every effort to induce owners to start horse teams, and am in hopes of getting a good number on the road next month. I have just arranged to ship, per *Orient* to London, the copper and ore at Port Augusta, at a freight of 20*s.* per ton. I have to report two smelting-furnaces at work; the third one is ready for the plates. I forward a report upon the Blinman Mine from Capt. Anthony. I have no fresh report from the 'Yuda,' no change having taken place there; it is still looking well. We shall raise a considerable quantity of ore next month." Capt. Anthony reports, under date August 19.—"Blinman Mine, No. 2 Shaft: The 20 is driven south of this shaft 15 fms.—Same Shaft, 10 fathom level: Here, and 15 fms. south, a winze is sunk 7 fathoms. The appearances here and in the level below are very encouraging indeed, showing as they do that the ore holds good in depth, and is extending north on the course of the lode. The Big Bunch is now 3 fms. below the 20. This wonderful course of ore is quite as valuable as ever. In the present bottom it is 15 ft. wide from east to west, and 12 ft. from north to south, and averaging from 15 to 20 per cent. as it is broken; at times during the past month it has been worth 1000*l.* per fm. The open cutting on the Big Bunch is yielding a fair quantity of good ore.—No. 4 Shaft: The 10 is driven 25 fms. north; this brought us to the bottom of the 'chimney,' a master branch, where the lode enlarged to the width of fully 6 ft., and forming a good bunch of ore, thence to the end we have had a good lode; we are carrying but one wall, as it is too wide to break in an ordinary level. At the bottom of the 'chimney' we opened the lode in the western side of the level, and discovered the western wall, where the lode is 3 ft. wide, of 25 per cent. ore as broken. I am highly pleased with the bottom of this level, and have no doubt another 10 fathoms sinking will open a still better mine. We have 22 men sinking winze and driving levels, at an average price per fathom of 18*l.*; average yield, 6 tons of ore to the fathom, of an average produce of 15 per cent. as broken. There are 16 men stoping, at an average cost of 12*l.* per fm.; average yield per fathom, 6 tons of 15 per cent. ore as broken; so that our present monthly yield of ore should be about 260 tons, equal to 3900 units of copper. The mine never looked so well as it does now." Cost-sheet for the month of July, including smelters, &c., 860*l.* 18*s.* 9*d.*

Great Northern Copper.—Mr. Bonney (August 26) states that—"Your letter of June 27, conveying instructions to me to suspend operations at all the mines, reached me on the 10th inst. And by the first post which left for the North I gave directions to the purser to carry your instructions into effect. A copy of my letter to your purser, together with the report of the captain, in which it is mentioned that the directions for closing the Nuccaleena Mine were being acted upon, are enclosed."

Worthing.—Aug. 25: Bremer Mine: Legg's engine-shaft was down to 62 fms., and the branches spoken of in last advices had greatly increased in size and number, yielding good quantities of ore. No improvement in the north end of the 53. The south end of same as last reported; ground a little easier. The shaft on Boundy's lode was down to 23 fms. The lode from the 12 to bottom of shaft averaged 3 ft. wide, composed of black ore, white quartz, and mundic, which would make a good profit in working. The captain reports that the stopes in the back of the 12 were yielding good grey ore and carbonates, and would add greatly to the value of the mine. The quantity of ore raised and dressed in the month was 270 tons, and 65 tons of regulus had been made; 40½ tons of copper had been shipped, and there were 23 tons more at port: 50 tons of regulus had been delivered to the Copper Company, and 45 tons more in course of delivery, and from 500 to 600 tons of ore on hand. The acting manager expected to report favourably next mail as to Rhodda's process and Scott's Creek smelting-works. Wood coming in in quantities. There were 130 hands employed, and the expenses of the month, including the masonry at Scott's Creek, wood, &c., had been 1965*l.* 19*s.* 8*d.* All things might be considered as going on most satisfactorily.

Port Phillip and Colonial Gold.—Aug. 25: Quartz Crushing: The quantity of quartz crushed during July was 4319 tons, yielding 1260 ozs, 11 dwts. of gold, or an average of 5 dwts. 20 grs. per ton. Receipts, 1910*l.* 19*s.* 5*d.* Payments—ordinary, 1115*l.* 3*s.* 5*d.*; machinery, &c., 258*l.* 15*s.*; together, 1373*l.* 18*s.* 5*d.* Profit, 537*l.* 0*s.* 11*d.*—Return for August: Quartz crushed, 4175 tons; yield of gold, 1406 ozs. 16 dwts. 12 grs., or 6 dwts. 17 grs. per ton. Remittance, 500*l.*

English and Australian Copper.—Aug. 26: The quantity of coal at Kooringa was 2155 tons, at Kapunda 340 tons, and at Port Adelaide 225 tons. At Kooringa there were five furnaces at work, and four furnaces and two refineries at the Port Works. Since the date of the last advices a further shipment of 50 tons of copper had been made.

Scottish Australian.—Aug. 20: Lambton Colliery: Mr. Croudace, the viewer, reports as follows:—"Since my last report we have been very steadily employed at the coal. We can produce from 400 to 460 tons per day of good clean marketable coal. The quality of the coal keeps steadily improving." Mr. Morehead, the superintendent, states:—"We are doing a fair amount of business, having regard to the state of development our works might be expected to have reached up to the present time, our sales during July having been 3350 tons."

Cadiangullong Consolidated Copper.—Capt. Holman, August 16 and 19.—Cadiangullong Mine: The tributers at work at the stope at this mine have sampled 28½ tons of ore, estimated to produce 12 per cent. of copper. The stope was yielding better, and was let at 9*s.* and 12*s.* tribute.—West Cadia Mine: Capt. Holman reports—"The quantity of lode stoped in the past month has been 26 fms. 4 ft.; sunk on the lode, 11 fms. 2 ft.; driven on the lode, 20 fms. 2 ft.; and cross-cut over 7 fms.: total, 65 fms. 2 ft. 11 in. The estimated yield of ore therefrom is 30 tons of 13 per cent. The mine appeared to be improving generally as the operations of the various shafts and drives for laying it out and opening it up continued to be prosecuted." In a supplementary report of Aug. 19 Capt. Holman writes—"A portion of the lode has been discovered in the hanging-wall of the east shaft, Iceley's lode, which is from 9 to 12 in. wide, and yielding well of rich yellow ores; the lode is loose, and the orey part appears to be standing in the roof for some fathoms above the present bottom of the shaft. The 15, west of Baker's shaft, is again improving, the men having this morning discovered a soft orey lode of 6 in. wide, which is expected to open larger." Ore in hand at the smelting-works, 414 tons; copper, 7 tons. The winter weather for several months had been very wet, which had considerably impeded both mining and smelting operations. A favourable change, however, had taken place, which Captain Holman states would facilitate both the surface and underground works. The shares of the company are quoted by the brokers in Sydney at 10*s.* premium.

Fortune Copper.—Mr. L. Samson, Aug. 22: The *Dispatch* has sailed with 150 tons of copper ore, and I enclose bill of lading for the same. The *Zephyr* arrived on the 16th inst., and will take 230 tons of copper ore, and by the *Merchantman* I hope to ship the whole of the lead ores, about 550 tons. Capt. Penberthy reports, under date of July 30:—"The cutting down of the new shaft to the 40 is completed, the pitwork is fixed, and the engine is in the new engine-house, and in three days I trust we shall be in working order.—The 30 fathom level, north-east end: At this point I have cut into the lode about 5 ft. without finding the footwall; the lode is composed of mundic and a large quantity of lead ore, and I consider it very promising. The stopes in the back of the 20 are producing 1½ ton per fathom of good yellow copper ore, and the lode has considerably improved during the last few days. The stopes in the 40, north-east, are at this moment under water, in consequence of the pitwork being removed from the shaft to the new shaft, but in a day or two work will be resumed; they were looking well, and producing 3 tons of copper ore per fm. The shaft on the new section is down 8 fms., lode large, and producing good stones of grey and yellow copper ore throughout. Ore dressed this month, 30 tons of copper and 8 tons of lead."

TRUTH'S ECHOES, OR SAYINGS AND DOINGS IN MINING.

The transactions in the Mining Share Market continue on a limited scale, and the general tendency during the early part of the week was a decline in most shares; but yesterday and to-day there appears to be a little more firmness, with enquiries which are likely to lead to a more favourable market.

Wheal Setons have been done at lower rates.—West Setons are apparently firm, but buyers scarce.—Clifford have slightly fluctuated, but several shares have changed hands during the week.—East Bassets have been enquired for at buyers' figures.—North Bassets have been done at nominal rates.—East Carn Brea are in request at slightly improved rates.—Cook's Kitchen are offered at lower rates; and Tincroft have further receded.—Wheal Bullers have been done at nominal rates.—South Condurrows have receded, and are more freely offered.—Nangiles show a greater tendency to decline.—Great Laxeys continue to maintain their price, and are freely enquired for.—Wheal Grenville and East Grenville have been dealt in at lower rates, but less sought for.—North Treskerris are lower, and more freely offered.—North Roskear and North Roskear are remarkably quiet at lower rates.—St. Day United and Great Busy are more than ordinarily dull, and freely offered.—North Downs have receded.—Hallenbeagles have been enquired for at a slight advance.—East Roswarne continue inactive at weaker figures.—Roswarne Consols have been done at nominal rates.—Carn Camborne have changed hands at quoted prices, but are not very active.—East Lovells have been rather extensively dealt in, and prices have consequently advanced.—Great Wheal Vors have been active all the week, and numerous transactions have transpired at improved prices.—Providence shares sought for at nominal figures.—East Caradons receded very considerably during the early part of the week in consequence of the monthly sale of copper not realising so much as anticipated by some parties; but a reaction has since taken place.—Marke Valleys are offered at lower rates.—West Caradons have been enquired for at nominal rates.—Treskerby and Mary Ann have been in request at fair market figures.—Higgotow Downs are sought for at nominal prices.—Kelly Brays are offered at lower rates, but there are buyers at minimum prices.—Lady Berthas have been in demand at advanced prices in consequent on anticipated discoveries; but have since receded.—East Rosellas have been dealt in, but prices have fluctuated.—Crebors also enquired for at minimum rates.

East Caradon.—The caunter lode in the 60 east is poor; the 70 east is worth 1*l.* per fathom; the 80 east, 10*l.*; and the 80 west, 12*l.* per fathom.—New Lode: The 60 west is worth 7*l.*; the 80 west, 7*l.*; and the 80 east, 15*l.* per fathom. The south lode in the 70 east is worth 6*l.* per fathom. The sale of 475 tons of copper ore on Thursday realised 2135*l.* 16*s.* 6*d.*; and Marke Valley sold 410 tons, which obtained 1332*l.* 10*s.*

Lady Bertha.—The driving the 30 east towards the great cross-course, with a view to intersect the lode on the other side, has been in course of operation for four years or more. During the past week they have cut into the cross-course, and found it highly mineralised. The discovery is deemed of the greatest importance, as the character of the ground is indicative of valuable results, and should the lode prove productive a large run of ore ground may be expected, as the lode is whole to the surface for upwards of 50 fathoms.—West Sharp Tor: The driving of the 162 is represented to be making with more favourable prospects of important results. That portion of the lode which is being carried has become more orey, and estimated worth from 12*l.* to 14*l.* per fathom, affording every reason to calculate on yet reaching a permanent course of ore.

Devon Great Maria.—It is reported that a very important discovery has been made in this property. In driving a cross-cut to intersect a north lode they have cut so large and beautiful looking a lode as can possibly be seen. They have gone into it 4 ft., and so far as thus seen, it is composed of capel, quartz, mundic, and yellow and black ore. The opening of this lode is looked upon with deep interest, in consequence of its approximation to Devon Consols.—At West Chiverton improvements are reported to have taken place in the 80 west, on William's lode, worth 40*l.* per fathom. The 80, west of Valley branch, is worth 25*l.* per fathom, and the 70 winze, on the same branch, is worth 20*l.* per fm. All other places are looking remarkably well.—At Chiverton they have cleared the 50 from Murray's shaft to Cookney's about 5 fms., and will commence driving next week, the driving of which level is expected to be the commencement of opening out rich lead ground, as large and rich stones of lead ore have constantly been met with in clearing the level. At Cookney's shaft the lode has very much improved in appearance, and an important feature has appeared in the composition of the lode, in the presence of barytes, which is looked upon as a most favourable addition. The shaft below the 50 is larger than above, consequently the clearing will be attended with greater facilities.

Cook's Kitchen continues to look well in the deep levels, especially in the 238 east, where the lode has proved for 11 fathoms worth 25*l.* per fathom. The 246 has been driven on the north part of the lode 33 fms., and they have recently cut through the south part, worth together about 50*l.* per fathom. In the 234 a winze has been sunk just over the 246 fm. level end, and is worth 24*l.* per fathom. There is a piece of lode in the 234 end east, and in the winze the lode in the eastern part is worth 6*l.* per fathom. There are several other productive places looking well, and many points towards which operations are now being directed that are likely to prove valuable when being completed.

Wheal Basset and Grylls has very much improved during the past three months, and the prospects generally are of a most encouraging character. At Wheal Fanny they have opened an extensive run of tin ground in the 30 and 40, from whence they are turning about 8 tons of tin per month, and calculate on doing the same for 12 months to come, without any discovery. At Tyacke's they are down to the 50, and ready to commence sinking below; they expect to cut the lode in that level in about a month. The 44 is opening good tin ground, the rise in the back being worth 14*l.* per fathom. The several other levels are yielding good stamps works, and the different lodes within range of this shaft are producing profitable work. In the development of Wheal Fanny they are laying open some rich work for tin, especially in Dridger's shaft. The operations which are being carried on in this portion of the mines are likely before the next quarterly meeting to lay open an extensive run of good tin ground, and is looked upon as a very important acquisition to future successful results. Since writing the foregoing, I learn that the ground in the cross-cut driven to intersect Tyacke's lode in the 50 is become easier—indeed it was let at 4*l.* per fm. last week, whilst they were paying 12*l.* before. A similar change took place previous to cutting the lode rich in the 40; consequently, in a short time we may expect to hear of some important discovery in the 50.—East Basset and Grylls: The caunter lode, in the 18 east, is looking very promising, and they have a profitable end, leaving good work for tributers. Other points are looking encouraging, and likely to improve on being more fully opened.

Sithney and Carnmeal.—The operations here are going on satisfactorily, and the shaft is down about 13 fms. below the 95, and it is intended to make this a 15 fm. lift, in consequence of the improved character of the lode in sinking the last 2 fms., they propose taking down the lode in the course of the coming week, which will produce good work for tin; they also calculate on having 10 tons of tin for sale this quarter.—Great Wheal Vor continues to look remarkably well. The lode in Ivey's shaft has improved, and is now worth 200*l.* per fm., and all the ends are also looking well. The 154, driving west of Metal shaft (and within 20 fms. of Ivey's), is worth 180*l.* per fm., and will come in under Ivey's shaft. They sold last Friday 50 tons of tin, for four weeks.

At Great Wheal Metal operations have been commenced in a spirited manner, and in the opinion of those well conversant with the run of the lodes in this locality, the shaft will take the junction of the Metal lode with the caunter.—At Great Fanny no important change has taken place for some time past, but hoped for, because it is needed. At Wendron Consols it is reported they have abandoned all their dead work, as well as the prospect of any important discoveries arising from explorations; their points of operation are improving, and returns likely to be increased.—Tolvadden, quarterly meeting was held on Tuesday last. The accounts showed a loss of 900*l.* on workings, and a credit balance of 400*l.*, this probably out of the last call of 5*s.* per share, amounting to 1500*l.* The meeting was adjourned for a month, to consider the proposition made by Captain A. Bennetts, who offered to sell to the company an additional piece of ground to the west for 1200*l.*

North Devon continues to look remarkably well in all the productive points of operation, and in some places much improved. The rise in the caunter in the back of the adit is worth 15*l.* per fathom, and the winze below the adit 18*l.* per fathom; the ends continue the same as last reported. The rise in back of the 10 is worth 12*l.* per fathom. The lode in the winze below the 10 is a rich course of lead, valued at 120*l.* per fathom. The 20 is being driven towards the caunter, and will intersect it in two or three weeks. The 30 is yielding good stones of lead, and a cross-cut is also being extended to intersect the caunter from that point. The stopes below the adit on the middle lode are worth about 18*l.* per fathom. Other places are looking well, and all operations, both under ground and at surface, going on satisfactorily. The five most productive places on the aggregate are worth upwards of 180*l.* per fathom, and when the caunter is intersected at the 20 and 30 the returns will be considerably augmented. The bi-monthly sale will be about 50 tons of silver-lead ore, which will give a good profit on the working.

At Great Darren they are driving by the side of the great lode in the 15, both east and west, by six men in each end, and intend to take the same down during the coming week, when greater facilities will be afforded in fully opening on this large and productive lode.—At South Darren several improvements are reported during the past week, and the mine continues to open out remarkably well.

James Last.

From Mr. William Lelean:—Now that people are beginning to breathe a little freely, after the commotion that has prevailed in the commercial atmosphere for some time past, much more rational, and therefore temperate, views are taken of the trial through which we are passing. The magnitude and extraordinary augmentation of our foreign trade during the present year led many persons to conclude that our manufacturers had been greatly overstocking the markets, and that a crash of a frightful character must very soon take place, and that this, added to the monetary embarrassments which must necessarily follow the undue extension of joint-stock adventure, would inevitably involve all in more or less of difficulty, and many in absolute ruin. The commercial failures of the last eight or ten weeks were apprehensively looked upon by many as only "the beginning of the end;" and timid people who, under the circumstances, would have been glad to invest their money in even somewhat hazardous enterprises, cautiously put it by, where they had reason to hope it would be safe, while many who held shares, and other securities, hastened to sell them at what they could get for them, fearing delay would but end in still larger loss. Hence the depression in all sorts of stocks and shares, and the general flatness, amounting to almost lifelessness, in the share market, in spite of the attractive things that invited public acceptance. How much of the prevalent fear was without any good reason most persons are now beginning to see. Each week still brings with it its commercial failures, but, as the *Times* observes, their announcement does not now seem to affect the markets, the additional experience of each day tending to confirm the impression that the principal mercantile houses of London having kept in view for some time past the dangers of all operations that produce, in the face of the high rates current for discount, are free from any dangerous commitments, and that such difficulties as may occur will continue to be confined to speculative operations, or to brokers and financiers who may have been induced largely to guarantee the transactions of others. The magnitude of the cotton trade during the past year, and the revulsion that has taken place in the price of the article, is very reasonably looked upon as having been in themselves sufficient to produce almost as much disaster as has arisen out of all other causes combined; so that, altogether, the great body of the commercial community have ground for pride in the stability that has been shown.

As a correspondent of the Journal last week remarked, it must be satisfactory to every one interested in mining property to observe how well judicious investments of sort have stood the brunt of the general wide-spread depreciation during the last very three months in comparison with other commercial undertakings. The fall in the price of good mining shares, compared, for instance, with the fall in the price of bank stock is as nothing; and they are gradually rising to their former level. Those who have listened to my advice whether to retain their shares in all sound or promising and well conducted mines, or to buy where such shares were being forced to sale at low prices will now be finding the profit of having done so. But confidence continues to be "a plant of slow growth," and there are, therefore, still some shares to be had at prices much below what they are fairly worth. I last week pointed out several of these, and gave my reasons for recommending them. I may now mention, without intending to ex-

…ches I have previously mentioned, but now omit, or even some which I consider good mines, but the prices in which are, in my judgment, too high. The EAST LAXEY is improving every week, as I expected it would do. The lodes are increasing in size, and improving in appearance, and the preparations for sinking on No. 1 will be completed, they believe, in a week or so. The EAST TRESKERBY, which is in close proximity to the two lastnamed mines which try the faith and patience of the original adventurers, but which so often turn out great prizes; they are getting tin, copper, and bunds, though, as yet, in small quantities, but the improvements are very encouraging. The GREAT SOUTH CHIVERTON is being worked with energy and judgment, and all the expectations formed of it are sustained. The GREAT LAXEY shares have again gone up in price, being now 17l.; and, as I have all along said, the produce of the mine, the returns, and the dividends paid render it a cheap and, in all respects, desirable investment. The shares will go much higher, as they are entitled to do. The BEDFORD UNITED, which declared its last quarterly dividend on the 12th, may be strongly recommended, for the reasons I last week remarked upon; and I again mention EAST PROVIDENCE, and refer to its latest reports to support the favourable judgment I formed of it.

From Mr. JAMES CROFTS:—Particular attention is drawn to EAST WHEAL VOR, in 6000 shares, with 5l. paid. The company have upwards of 5000l. capital in hand, all machinery paid for, and no debts beyond current costs. These shares were freely sold, on their introduction to the market, at 8l., and can now be had at a very considerable discount, merely furnishing an instance of depression caused exclusively by the state of the market. The writer also refers to his advertisement of this day for other cheap stocks deserving of immediate attention. There is an important report from CENTRAL MINE, which, to the practical miner, points to almost immediate and highly profitable—" the indications being in favour of large quantities of lead being near at hand." The ROSEWARNE UNITED is also promising great success, and those to whom a few words suffice when the source of them is uncontaminated will do well not to neglect either of these shares for an hour.

From Mr. EDWARD COOKE:—There has been more business doing than for some time past. With a revival of confidence on the part of the general public, I have no doubt that British mines will participate to a large extent in the great reaction that is at hand. The enormous decline that has taken place in the price of shares in the various financial companies must tend to show that to invest in them is anything but advantageous. The operations of those companies are of such a mystical character that none but the immediate executive are aware of their real financial position. From the first time of their introduction to the public, I have endeavoured to caution them against being led away by the profits assumed to have been made by the respective financial companies. It has too often been lost sight of that the dividends declared have been on the par price of the shares, and not on the market price, which until recently has varied from 5l. to 15l. premium per share. I consider that good mining property, that pays from 10 to 15 per cent., is far preferable as an investment to many of the companies figuring on the Stock Exchange miscellaneous list. I would just mention the following mines that through all the late depression have not been at all unfavourably affected in price:—DEVON GREAT CONSOLS, SOUTH CARADON, HERODSFOOT, TRELAWNY, FRANK MILLS, &c. There are many others that have only been affected to a small extent, thus showing that there is some stability in good mining property as an investment. It should be remembered that mines generally are not divided into 100,000 or 120,000 shares, as in the case of international and other financial companies, but generally in 4000 or 6000 shares, hence a fall of 1l. or 2l. per share in them is insignificant, as compared with the decline of the same amount in the former companies' shares. Bank shares have experienced a great decline in price lately, those of the Alliance being the most serious. It is not too much to say that no other bank in London of the same age (if I may use the term) would have maintained its position in the same manner as the Alliance has done, had it gone through the ordeal of having its shares forced down by all manner of contrivances from 50l. to 3l. premium. Some of the most important old-established joint-stock banks have at various periods had similar ordeals to contend against, and after weathering the storm have passed into a state of great prosperity. It would be absurd to say that the business of any bank is not affected by a continual decline in the price of its share; I believe, however, that the Alliance Bank is financially sound, and that it will ere long regain its former position as the most important and prosperous bank that has been established during the last few years. I feel confident the shares will have a great reaction.

A large business has been done in GREAT WHEAL VOR shares. This mine, now known as the Wheal Metal, is marvellously rich, and indicates becoming equally important to the former state of the rich old Wheal Vor lode, that produced over 2,000,000l. sterling, and gave enormous profits to the shareholders, and at a time when the price of tin was considerably less than even its present depreciated value. The lode at that time was worth occasionally 1000l. per fm. A glance at the working section of the mine at the present time cannot fail to convince anyone acquainted with mines that the quantity of tin found already laid open is intrinsically more valuable than the present market value of the mine—180,000l. to 200,000l., would appear to be a moderate estimate. To this there is constantly being added by the ordinary working of the mine, as the points in operation are valued at 1100l. to 1200l. per fm. The shares are increasing in market value, and a little advance takes place in the price of tin they would have a very great rise. Although the last month's returns of tin did not exceed 52 tons, being the ordinary monthly return, and leaving a profit of about 1200l., I am in a position to state that had not the late drought interfered with the full working of the stamps the last month's returns would have exceeded 80 tons of tin, which, even at the present price of this metal, would have left a nett profit upon the month's operations of over 2000l., or at the rate of over 24,000l., or 4l. per share, profit per annum. The shares in EAST WHEAL VOR are now at such a price as should induce anyone in a position to do so to invest in them largely. The lode in the shaft—the old Wheal Vor rich lode above alluded to—is improving every fathom it is sunk upon, and already contains tin to the value of 7l. per fm. This may appear to some of small amount, but to those acquainted with the district it is considered highly important; and when the junction is reached, some 20 fms. deeper, it is not at all unreasonable to expect that a very valuable deposit of tin will be the result. Such was the case at Great Vor, and the perseverance of the shareholders in obtaining to a reasonable depth in the Wheal Metal part has again met with its reward in the great riches discovered. East Wheal Vor contains the same elements, and is identical in every respect, having the same lodes and the same stratification. To develope these most promising lodes there is an unexpended capital of about 5000l., and ample plant for all purposes; therefore, whoever buys the shares need not be at all apprehensive about any calls being made. The shares are now selling at about equal to the capital in hand, and the plant, consisting of two steam-engines, stamps, dressing-floors complete, and every other requirement requisite for a great mine. Besides this, there has been upwards of 25,000l. expended in really useful and necessary work, and all available to the present company. Therefore, whoever buys the shares at present prices cannot scarcely fail to realise a large profit upon a slight reaction in the market. The real cause of the decline in the price of these shares from 5l. each is entirely attributable to the failure of parties who held largely. Their interest in the mine, however, is now absorbed, and the shares have passed into better hands.

EAST LOVELL shares have experienced a considerable rise, owing, probably, to the approaching completion of the shaft. To realise any idea of the magnitude of the sinking of this shaft, and completing it with skip-road to the bottom of the mine, it would be necessary to see it. It has cost both a great deal of time and money. The importance, however, of its being done will be seen by-and-bye by the increased returns of tin. As I stated in the Journal last week, I have great confidence in the future of East Lovell, and, in fact, of the whole district. When operations were suspended for the purpose of sinking a good permanent shaft, East Lovell was a rich mine, and a rich mine it unquestionably is now, as but little tin has been raised since, in consequence of the alterations intended to. The public may buy or sell the shares as they think proper, but the present writer will, in my opinion, be a permanent one, as I believe it will be found that no mine in Cornwall will make such good profits, according to its working costs, as East Lovell. During the abeyance of returns of tin from East Lovell, GREAT EAST LOVELL, and, in fact, the other mines in the district, have been comparatively neglected. Great East Lovell is, in the opinion of every practical man who has seen it, a splendid piece of mining ground. When it was first introduced to the public the shares were applied for far beyond the number the mine is divided into. It has lost none of its value. The engine-house is being erected with all possible speed, and the engine will be put to work without any unnecessary delay. After paying for the engine, and everything connected with it, there will be an unexpended capital of about 1500l. According to all present appearances, there will be returns of tin long before the above capital is expended. At 2l. to 3l. these shares should be bought for a good rise, or for permanent holding. The accounts from NORTH CHIVERTON are more encouraging than ever, and, from present indications, I am justified in saying that it promises to become one of the greatest lead mines in Cornwall. The delay in the erection of the crusher has been occasioned by the unwillingness of the founders. When this is erected much larger quantities of blende will be returned. The blende, although of great importance, being of a rich description, bears no comparison, in my opinion, to the lead that will be returned when the several lodes are opened upon in the next level. North Chiverton will undoubtedly be a great lead mine. The large deposits of blende that exists in this mine would lead anyone to be of the same opinion. Witness the greatest lead mines—Minera, Great Laxey, and West Chiverton; they all produce blende. When North Chiverton shares are selling at double their present price, which assuredly will be the case ere long, according to present appearances, it will be remembered I strongly advised them to be bought at 2l. 5s. to 2l. 10s.

THE SLATE TRADE—ITS STATE AND PROSPECTS.—The highly satisfactory position of the SLATE TRADE—the demand being so much greater than the supply—renders all information respecting it of general interest. Some three years since a descriptive pamphlet was issued by Mr. T. C. Smith, of which two editions of 5000 each were speedily disposed of; this has now been re-printed, with much original matter from practical authorities in the several districts, and particulars of most of the quarries at work, explanatory of their state and prospects. The new work is published at 1s. each, and can be had at our office.

THE TIN STANDARD.—No further change has taken place in the tin standard since the reduction announced in the *West Briton* of September 15. We quote—Common, 94s. to 95s.; refined, 97s. to 99s. There can be no doubt of the truth of the remark recently made to his fellow-shareholders by Captain Thomas Richards—one of the best informed mining agents in the county—that a better price for black tin is indispensably necessary to make the generality of tin mining in Cornwall profitable.

PETROLEUM EXPORTED.—Statement of the number of gallons of petroleum exported from Jan. 1 to Sept. 10:—

	1864.	1863.
From New York ..... Gallons	15,518,145	14,597,243
From Boston	1,110,634	1,377,631
From Philadelphia	5,145,767	4,395,895
From Baltimore	647,844	729,792
From Portland	5,336	288,567
Total export from the United States....	22,546,957	21,389,131
Same time 1862 ..... Gallons		6,242,912

—*United States Railroad and Mining Register.*

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending October 16 was 11,414l. 9s. 6d.

THAMES TUNNEL COMPANY.—Receipts for the week ending October 15, 6l. 15s. 5d.; number of passengers, 16,505.

HOLLOWAY'S OINTMENT AND PILLS.—Diseases of the most formidable and chronic characters have been cured by Holloway's remedies. Ulcerations which had proved themselves incurable by any other known means have healed kindly under the purifying and regenerating influence of this excellent ointment. Sprains, erysipelas, stiff joints, contracted muscles, and glandular swellings, can be most safely and effectually treated by Holloway's ointment and pills, which can do no harm under any circumstances. Neither of these medicaments have anything deleterious in their composition, but are essentially purifying and strengthening in their nature. The combined power of these noble remedies enables them successfully to cope with most descriptions of injuries, and to cure, or at least relieve, most varieties of disease.

Mining Correspondence.

BRITISH MINES.

BEDFORD CONSOLS.—J. Mitchell, Oct. 20: In the middle adit level east we are pushing on the cross-cuts north and south as fast as possible. The ground is a little stiffer for progress than when last reported.

BEDFORD UNITED.—J. Phillips, Oct. 19: No change of importance has taken place in any part of the mine since the last general report for the meeting.

BEDOL-AUR.—Oct. 19: The 70 end is poor at present, and hard, but hope to report more favourably on it next week. We have suspended driving on the strings, but are stoping under them. I shall be able to say more about this next week, as we have not proved its value yet.

BOSCAWEN.—J. Edwards, R. Giles, Oct. 15: There is nothing new in the 80 or 70, west of Hunter's shaft, since last reported. The lode in the sump-winze sinking below the 70, west of said shaft, has improved during the past week, now worth full 20l. per fathom for copper ore. No. 2 winze is suspended in consequence of water; we have put the men to sink another winze about 14 fathoms to the east of No. 2, at the same level. The south lode in the 70, driving east of Hunter's shaft, is still producing rich stones of copper ore. We have intersected this lode at the 74, south from Kitelee's shaft, but cannot yet give you its value. The lode in the stope in back of the 70, west of Hunter's shaft, is worth 20l. per fm. for copper ore. We have suspended the driving of the 30, east of the caunter shaft, for the present, and have put the men to drive the 40, west of Hunter's; our object for driving this end is to meet with the same shoot of ore which we have in the back of the 50. The lode in the 14 fm. level, east of Kitelee's shaft, is producing stamping work for tin.

BOTTLE HILL.—J. Eddy, Oct. 19: Main Lode: The lode in the stope in back of the 12, east of new shaft, is now 10 ft. wide, and improved in quality this last week. The lode in the stopes east and west of shaft, in back of the adit level, is about 8 feet wide, and turning out fair stamps work. We have a long piece of ground both east and west of said shaft, but the continued shortness of surface water impedes our progress from stamping sufficient tinstuff to increase our sampling. If we had a full supply of water I have no doubt the tinstuff now breaking in this part of the mine would be returned at a profit. The ground in the cross-cut, north from main lode towards Blanchard lode, is very favourable, and the men are progressing very satisfactorily. I hope to send away samples of our tin by Saturday next, quantity from 3 to 3¼ tons.

BRITISH COPPER COMPANY.—J. Shaw, Oct. 17: Rednal Mine: I have made every necessary exploration in the bottom level of engine-shaft, and regret to say there is nothing found worth working between the bottom level and quarry pit. Mr. Phillips is also convinced of this, and he is of my opinion that there is not much copper ore to get south of the fault. I have explained my future plan of operations to Mr. Phillips, which he thinks with me is the best course to pursue, the same I now wish to describe to the directors—that is, to sink a pit at the end of the middle level north of the fault. By this new pit we win a new breadth of lode 30 yards broad and 180 yards long, which gives an area of 5400 square yards of lode, which can all be got to the new pit, and with the same engine working only the top lift. As I have already disconnected the bottom lift, and proved the top lift is sufficient to drain the middle level, by which the pressure of steam is reduced from 50 lbs. to 29 lbs. on the square inch, which will make the boiler last much longer, and be a saving in coals and repairs of engine and pumps. I have two reasons for proposing this mode of working. First, I have driven through the fault in the quarry entry, and on the north side. I am glad to inform you the lode is as good as in the middle level to the south of the fault. Second, in this direction (north of the fault) the former company has worked across the field in the upper level without a break, which proves there is no fault in this distance. The greatest inducement must be in this direction. If the lode proves as rich in the deep as it is at the quarry entry, I have no hesitation in saying that it will pay well; but I regret that I am prevented from proving the under level in the same manner as the top level, as there is neither ventilation nor road to take away the stuff. The cost of making a road would be a great deal more than sinking a new pit, and by a new pit the underground carriage would be saved, and a pure ventilation gained. The cost of sinking this pit and removing the gin complete would be 60l. I have, along with Mr. Phillips, examined the property above the village of Eardiston, and found good specimens of copper ore at the surface. If the lode proves as good at this point as at the north side of the fault it will be valuable, as I believe it can be got without pumping, and it will be no great depth to sink to. With the consent of the directors, I can prove the lode at this point with little expense, and I have advised a friend of mine to take shares. I strongly recommend the directors to visit this mine, as I have dialled all the old works, and set them out on the surface, where they can be better understood than on paper.

BRONFLOYD.—Thomas Kemp, Oct. 20: We have extended the cross-cut through the run of ore ground, 20 feet from the 52; for that distance the lode will average 2 tons of lead ore per cubic fathom, or for the length cut into 95l. per fathom. In the present forebreast we have cut a joint hard and poor. As instructed by you, I have put a full pare of men to open on the course of the lode, both east and west of the cross-cut, and I am pleased to say the part of the lode carried in each bargain is yielding 3 tons of lead ore per fathom. So soon as these men get out of the way I shall put two to continue through the point to reach the north wall of the lode. The ground in the north cross-cut, from this same level, driving towards the south lode, is composed principally of blue slate, intermixed with spar, spotted with lead; the men are making a little better progress. The stope in the bottom of the 40, west of winze, is without change, yielding about 1¼ ton of lead ore per fm. The stope above the back of the 40 is yielding ½ ton of lead per fathom. In the tribute pitch to the east of this stope the men are breaking some good lead. Our dressing is progressing satisfactorily towards our next sampling, which will be 50 tons of good quality ore.

BRYN GWIOG.—C. Painter, Oct. 18: The lode in the 102, driving east of the engine-shaft, still continues small and poor, but the appearance of the end to-day is a little more promising, and letting out a small quantity of water; 6 fms. more driving will, we think, cut the run of ore. The lode in the 90 still continues the width of the level, say, 5 feet wide, and no appearance of a north wall; the lode is principally composed of spar, yellow sand, blende, calamine, and lead ore, with numerous small lochs; the yield for lead ore is 2½ tons per fathom. The lode in the sump sinking in bottom of the 90 eastern level, about 11 fms. from engine-shaft, is very large, and producing full 1½ ton of lead ore per fm. The party of men we put to drive and stope on the run of ore discovered in the back of the 90 are producing more lead, but it is hard for breaking. The pitch working below the 90 west, near the engine-shaft, continues to yield 1 ton of ore per fm. The pitch in bottom of the 85, east of shaft, is worth 15 cwts. per fm. The pitch below the 75 eastern level, west of sump, is worth 1½ ton per fm. The pitch east of sump, on the same run, still continues to look very well, yielding 3½ tons of lead ore per fm.; the run to this point appears to be opening out more productively, and dropping more perpendicularly, than we have hitherto seen; some part of the lode in the 90 eastern level does not look much unlike the nature of this run, and as our 90 east is now about 28 fms., or rather more, from the engine-shaft, we may, in all probability, be getting into the run of ore ground sooner than we anticipate. The two pitches in bottom of the 75 west yield on an average 1 ton of ore per fm. The lode in 75 west end is opening out better for lead than we have seen it for some time past; the lode at present is 2 feet wide, composed of spar, blende, darkish clay, and sand, with a very good leader of lead, the produce about 1½ ton per fm. Brook's pitch in the flat in back of the 66, west of engine-shaft, is much improved, yielding full 2 tons per fm. The pitch behind Brooks's east, in the same flat, is worth 25 cwts. per fm. At the new surface shaft west we are still in beds of good-looking limestone; occasionally between these beds there is clay, with several small cross branches running north and south; the branch of ore we discovered on the south side of the shaft still continues with us, and is dropping perpendicular with the shaft; by present appearances we are not far from the principal shaft. Everything on the mine is being pushed on as fast as possible, and all the machinery in good working order.

BRYNTAIL.—J. Roach, Oct. 20: In the 30, east and west of engine-shaft, we are making good progress in driving. The lode in the eastern end is showing good spots of lead ore, and the ground congenial for the production of that mineral. The same remarks are applicable to the western end. Here we shall soon get under the ore ground passed through in the 20. In the 20 east we have driven a cross-cut in the lode 10 ft., but the south wall has not yet been reached. During the last day or two the matrix of the lode has changed its character, in which we find stones and a mixture of lead ore. The indications are in favour of large quantities of lead being near at hand. The winze sinking under the 20, on north part of the lode, is producing a good mixture of ore throughout, but the ground is wet and spare for breaking. I believe when the 30 gets under this ground we shall have a good course of ore.

BULLER AND BASSET UNITED.—J. Ruie, Oct. 18: The 80 west, on south lode is producing rich stones of yellow ore, and the south wall not yet reached; we are still driving in that direction. The 80 fm. level cross-cut is progressing favourably. In the 60 west, on the engine lode, the lode in the bottom and half-way up the end is 2 feet wide, but not quite so large in the back; it is yielding good work for tin.

CAPE CORNWALL.—R. P. Goldsworthy, Oct. 19: In dropping the bucket drawing-lift below the 30 fm. level 5 fms., on Saturday last, the windbore lodged on deads, or attle; we have forked down to that point. We suppose that the shaft is sollared in the 40, and that the sollar contains 5 fathoms of attle; our men are clearing up the same half the length of the shaft, and when we reach the sollar we shall cut it through, and drop our lift to the 40; the remainder of the attle we shall lodge in that level until our arrangements for drawing are completed. This will retard the forking, but we will keep a full pare at work day and night until we have accomplished the job, and resumed forking. Wheal Owl lode, in the adit, is producing splendid stones of tin; the lode in the shaft is composed of gossan—very promising.

CARADON CONSOLS.—W. Rich, Oct. 18: We are opening out west on the branch in the 80 south mentioned in my last report, but it is small, and appears to be unsettled near the cross-course; the ground, however, so far is moderately easy for driving. We are forcing on the cross-cut south by six men; there is more water coming from the end, and spots of native copper with the granite. There is nothing new in the winzes sinking below the 80 fm. level.

CARADON VALE.—J. Johns, Oct. 18: In the 40 west the lode is 3 ft. wide, producing large stones, mixed with ore; the same as I sent on last week; we hope it is a deposit of ore. There is no change in any other part of the mine.

CLARA UNITED.—James Lester, Oct. 19: The sinking of the engine-shaft is a work of difficulty, owing to the large quantity of water issuing from the lode, the intersection of which was reported on the 6th inst.; the shaft was then down 9 fms.—now only 5 ft. deeper. The lode is still in shaft, and is literally boiling up with water; so far as the lode is exposed it is worth from 10 to 15 cwts. of lead ore per fathom—looking well for a further discovery when the main lode is reached. There is no change in the value of the lode in the adit at Dolwen.

CONNORREE.—Capt. Bishop, Oct. 15: In the deep adit the rock is more favourable for exploring, and yielding good sulphur ore. The sulphur lode in the 74, east of engine-shaft, is very large, and a great quantity of both lump and sulphur smalls can now be sent to market from this point, and at a cheap rate. In the 64, west of engine-shaft, nothing new for the week has taken place, but we have pretty much coppery sulphur to raise here when required. In the 45, west of engine-shaft, the yield of copper ore is good, and the sulphur part of the lode is much the same as for some time past. In the 18 fm. level ends, east and west of Field's shaft, the east end is looking better for copper, with less sulphur combined, and the matrix more favourable for the production of better class copper ore. No change in the west end for the week. The 10, east of Kempson's shaft, is looking very well indeed for copper, and one might say from a view of the ore that it looks like a great discovery of copper. In the 20 cross-cut, south of new shaft, the rock formation is better, and greater progress will now be made.—The stopes on the great copper and other lodes: On the whole, the yield of copper and sulphur ore has improved this week, and is of a better class.

CRENVER AND WHEAL ABRAHAM.—J. Vivian, Oct. 20: At Vivian's shaft, in Oatfield, the engineers continue to make good progress in putting in the 90-in. cylinder steam-engine. The carpenters are engaged here putting in the balance-bob, &c., the masons building steam-whim and capstan; the boilers builders are making rapid progress in their department. In our new smithy we are getting on very satisfactorily. In the engineers' shop two turning-lathes are at work, which will greatly facilitate our engineering progress. At Wheal Abraham, or middle sump, our 80-in. steam-engine could be got to work in about four weeks from this time, but I am doubtful that we cannot get our steam-capstan in time to drop our heavy pitwork. The balance-bob here is in its place. The masons are getting on with the whim and capstan as fast as possible, but the stormy weather has retarded our progress a little latterly, but, on the whole, we are making good progress.

CUDDRA.—F. Puckey, E. Dunstan, Oct. 20: In the 105, west of Walker's shaft, the lode is still 6 feet wide, worth 25l. per fathom. In the same level, east of the cross-cut, the lode is 4 feet wide, producing good work for tin, worth 18l. per fathom. The lode in the stope in the back of this level is still the same value as last reported. No lode has been taken down in the 90 west during the past week. In the stope in the back of the 75 west the lode is 6 feet wide, worth 18l. per fathom. The lode in the stopes in the back of the 60 west is 6 feet wide, worth 12l. per fathom.

CWMSYMLOG.—A. Williams, Oct. 18: In the stope 15 fathoms east of Pugh's shaft we are continuing stoping the back, which is yielding a little ore, but not sufficient to set a value on, being so near to the surface. We are busily engaged in making preparations for dressing the slimes and other ore. I have put two of the men to work on a lode which is forming a junction with our lode about 10 fms. east of Cwmdarren engine-shaft, which is yielding exceedingly good stones of ore on the very surface, and is underlying southwards. What we should do to further prove this is clearing and timbering adit level, and drive on its course from that depth, which will leave about 12 fms. of backs; and if it should prove as the appearance of it does here, it will add a great value to the property.

DALE.—R. Niness, Oct. 19: The appearance of the Pipe vein is much the same as when I last wrote you. The tributers are getting on very well with their pitch in back of the 50 end. Upon the whole, we are going on very satisfactorily.

DEVON AND CORNWALL UNITED.—T. Neill, Oct. 18: The lode in the 12 east is worth 6 tons of ore per fathom.

EAST BRONFLOYD.—A. Williams, Oct. 18: In driving the 25 fm. level east, on the north part of the lode, we have intersected a very large vugh, which is closing towards the bottom of the level; the water therefrom must be running over a large quantity of gossan. On the south side there is a bed of carbonate of lime, about 3 ft. thick. The lode in the end is become a little disordered by the influence of the said vugh, but it is gradually improving as we advance eastwards. The 25 fm. level east, on the south part of the lode, is producing good stones of ore occasionally, but not sufficient to value, and showing indications for further improvement.

EAST CARADON.—J. Seccombe, Oct. 19: Caunter Lode: The 60 east is poor. The 70 east is worth 15l. per fm.; the 80 east, 10l.; and the 80 west, 12l. per fm.—New Lode: The 60 west is worth 7l. per fm.; the 80 west, 7l.; and the 80 east, 15l. per fm.—South Lode: The 70 east is worth 6l. per fm.

EAST CHIVERTON.—Jas. Nancarrow, Oct. 19: We are sinking the engine-shaft about 3 fms. per week, in a good country for lead. The lode in bottom of shaft is larger, and of a very promising character, since last reported: it is as large again as before, being now about 2½ ft. wide, composed of white prian, spar, blue shale, and mundic. The eastern end on the south lode is still large, and of a very promising appearance, also in a splendid country for lead. The east end on the north lode is looking more promising since last week, and, as well, the country is not so spare for driving. At the north shaft we are making good progress in sinking, and the lode is looking still as promising as last reported. In the adit and cross-cut south the ground is a little easier for driving, and in a good country for lead. I think the piece of ground before this end well worthy of trial, as we have driven through the hill; and if we meet with a lode now in driving this cross-cut, I think our chances will be good.

EAST GREAT WORK.—John Lean, Oct. 19: The shaftmen have cut and secured the plat, put in plat collar, cased down the shaft to back of plat, and commenced sinking this day. Up to this time we have not intersected the caunter in the 10 east. If its underlie continues the same as where seen close to the surface, it ought to be intersected somewhere about the present end. In the same level west the lode seems to be making itself more regular, producing copper and lead—a saving lode. In the 8 fathom level, east of Moor shaft, the lode is producing stones of copper ore about half-way up the end; the back is poor. The stope in the back of the same, west of the shaft, is producing rather an increased quantity of ore. I think by the end of this working month we shall have 20 tons of ore at surface.

EAST GUNNIS LAKE.—J. Phillips, Oct. 20: The lode in the deep adit is not quite so orey, but still a very beautiful lode, with promise of improvement. No other alteration.

EAST JANE.—T. Hodge, Oct. 20: In the 36 we have driven south from the shaft 6 feet, in ground favourable for lead. In the 26 south the lode is producing some good work in the bottom; our drainage now is in the eastern part; the western part at this point is worth 6 cwts. of lead per fathom. The stope in back of the 14 north will yield 4 cwts. of lead per fm. Nothing else new in the bargains. The engineers are making good progress in erecting the engine; I think the engine will be ready to work by the end of the month. We have sampled to-day (computed) 10 tons of ore.

EAST LAXEY.—R. Rowe, Oct. 19: The leading part of the lode, which we are carrying in the shallow adit, is increased in size, being now 3 ft. wide, but still chiefly gossan, mixed with jack and particles of lead ore. The lode in the deep adit, which is only just now got under cover, is improving in size and appearance, being now 2½ ft. wide, a rich looking gossan. We are busy preparing to sink on No. 1 lode, and shall be ready in the course of another week or ten days.

EAST ROSEWARNE.—J. James, Oct. 20: Hallett's shaft is without change to notice. In the 75 east the lode is 6 in. wide, opening tribute ground. In the 75 west the lode is 18 in. wide, worth about 10l. per fm. We have two stopes in the back of the 75, worth respectively 14l. and 12l. per fm. We have been cutting cistern-plat, and preparing to fix lift at King's shaft, consequently we have not sunk since last reported. We expect to resume the sinking early in next week. In the 65, west of King's, the lode is 2½ ft. wide, worth 18l. per fm. The stopes in the back of the 65, east of King's, are worth respectively 16l. and 12l. per fm. The tribute department is without change to notice.

EAST TRESKERBY.—J. Nancarrow, Oct. 18: The lode in the winze below the adit is again improving, and yields tin to save; it is 1 ft. wide, and looks very encouraging. The 12 east yields blende, but not much tin. The stope in the back is worth 5l. per fm. The stope in back of the 12 west is worth 4l. per fm. The stope in bottom of the 12 fm. level west is worth 12l. per fm. The rise above the 30 is in the cross-course, and there is not for the present much lode in it. The ground in the 30 cross-cut north is not quite so good for driving as in the beginning of the month.

EAST WHEAL ELLEN.—R. Pryor, J. Garland, T. Corfield, Oct. 14: We have set the following bargains to-day:—The end is still in the elvan course, in which we find mundic, blende, and spots of copper ore in the joints; driving by six men, at 10l. per fm. The stope in bottom of this level by four men, at 4l. 10s. per fm.; the lode is about 3 ft. wide, and very kindly, producing full 2½ tons of ore per fm. The winze to sink below the shallow adit level, on Bargwanna's lode, by two men and two boys, at 3l. 10s. per fathom; producing good stones of ore and blende, with a good appearance.

EAST WHEAL FORTUNE.—J. Curtis, R. Roberts, Oct. 20: The adit level east, on new lode, which is being driven with all possible speed, is now fast advancing towards the eastern workings and junction of north branches. The ground is easier for driving, and as we advance eastward becomes more mineralised.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Oct. 19: There is no alteration at the engine-shaft since our last advice. The lode in the 75, east of engine-shaft, is 1 foot wide, producing good stones of ore, looking more strong and kindly, and letting out more water; therefore we think this a good indication. The lode in the 65 east is disordered by the cross-course. The lode in the 65 west is 10 inches wide, and yielding tin and ore worth from 1 to 1½ ton per fm. The western and eastern stopes are worth 6 tons per fm. The lode in the 55 west is 2 ft. wide, producing good work for tin, worth 15l. per fathom. The lode in the rise above the 55 west is worth 35l. per fm. We have to-day sampled (computed) 197 tons of ore.

EAST WHEAL LOVELL.—J. Burgan, Oct. 20: The new shaft is progressing rapidly, and as soon as finished we shall work extensively upon the tin ground.—South Lode: We have commenced to sink below the 28; the lode is 4 feet wide, and as I have not sampled it in bulk, I will report its value next week, after drawing a parcel to surface. The shaft at the top of the field, on the new lode, is suspended until the flat-rods are fixed, which must be done without delay. At present we are driving a cross-cut south to intersect other lodes.

EAST WHEAL RUSSELL.—J. Richards, Oct. 19: Homersham's shaft is in regular course of sinking below the 130 to the south of the lode, in ground favourable for progress.—Homersham's Shaft: In the 130 fm. level cross-cut north the ground is still hard, the progress is, therefore, slow, and as yet there is no appearance of the elvan, which, with the lode, has taken a more perpendicular dip than in the upper levels. In the rise in the back of the 130 east, on the south part of the lode, the lode is from 2 to 3 ft. wide, and consists of quartz, mundic, capel, prian, and good stones of ore. This rise is on the point of being communicated with Barkell's winze, sunk in the bottom of the 120 above. In the 120 west, and west of Maynard's cross-cut, on the north part of the lode, the lode is from 4 to 5 ft. wide, and is looking more healthy, yielding saving work, and promising further improvement. In the 120 east the lode is from 2 to 3 ft. wide, composed of flookan, mundic, peach, and quartz, the latter predominating. In the 77, west of Northey's cross-cut, on the north part of the lode, the lode is 3 ft. wide, and is worth about ¼ ton of ore per fm. In the 45 east the lode is 3½ ft. wide, consisting of capel, mundic, peach, quartz, and a little ore occasionally. In Williams' cross-cut north, at the 88, west of Hitchins's engine-shaft, fair progress is being made, the ground proving favourable for exploration.

— J. Richards, Oct. 19: I have to acknowledge the receipt of your letter of the 17th inst. I beg to assure you that the 130 fm. level cross-cut north is pushed on as fast as the nature of the ground will admit. There has been no hole bored more than is required in the ordinary way of working, and as yet there is no appearance of the elvan. Both lode and elvan have taken a more perpendicular direction, by no means an unusual occurrence in mining—in fact, in a great many instances it proves beneficial, and which I hope will be the case here also. I feel greatly interested in this matter, and intend going underground again to-morrow, and should there be anything new I will communicate it.

EAST WHEAL VOR.—J. Pollard, Oct. 19: Old Wheal Vor Main Lode: The engine-shaft, sinking below the 70, is progressing satisfactorily, but no lode has been taken down since our last. In the 70 fathom level, driving east, no change worthy of notice. In the 70 fathom level, driving west, the lode is full 4 ft. wide, and of a kindly appearance, producing occasional stones of tin. The 60 east is unproductive. In the cross-cut, driving north from plat, the ground is a little easier, and we expect to intersect Smith's lode in about one month from the above date. In the 60 and 50 fm. levels west the lode is as last reported.—Smith's Lode: The 16, driving east and west, is yielding tinny work. Vivian's shaft was yesterday communicated to the rise. We have this day sold to Messrs. Williams and Co. 3 tons 2 cwts. 0 qrs. 17 lbs. of black tin, which realised 177l. 5s. 2d.: No. 1, 2 tons 18 cwts. 0 qrs. 5 lbs., at 58l. per ton; No. 2, 4 cwts. 0 qrs. 12 lbs., at 43l. 10s. per ton.

FRANK MILLS.—J. P. Nicholls, J. Cornish, Oct. 18: We are now engaged sinking the engine-shaft below the 115 for tip-plat, fork, &c.; the ground continues much the same, and good progress is being made. We expect, therefore, to commence opening the plat by the end of the present month. The ground in the 100 north rise, and also in the 84 north winze, sinking against, is without any change since our last advice; still rather spare for progress. The lode in the northernmost end of the wide stope, in back of the 60 north, is not so productive as stated last week, being for 3 fms. back from the north end of ground comparatively poor. The remaining 7 fms., to the south end of this stope, are still looking well, yielding 1¾ ton of lead ore per fm. The lode in the stope in back of the same level, adjoining still to the south, has much improved, being now in all 18 ft. wide, carrying a horse of killas in its middle, and yielding 3 tons of lead ore per fm. for the whole width. The tribute department is yielding as much ore as ever, and at no former period have our tributes been so low. All other operations are also progressing well. We purpose sampling on Tuesday next 220 tons of lead ore—90 tons of No. 1, and 130 tons of No. 2, the latter of which will be divided into two parcels.

FURZE HILL WOOD.—W. Doidge, Oct. 19: I beg to inform you that the water is again in fork, and the shaftmen are preparing to sink the engine-shaft for a 50 fathom level, which will be pushed on with all dispatch.—No. 1 North Lode: In the 40 fathom level west the driving of the end will be resumed as soon as the stuff is cleared which was broken and accumulated whilst the water was in. The stopes in the back of this level are worth 6l. per fathom. In the 40 fathom level cross-cut north the ground is more favourable for driving, set at 6l. per fathom. We shall send away, in the beginning of next week a parcel of tin (computed) 7½ tons.

GAWTON COPPER.—Geo. Rowe, Oct. 15: The ground in the new engine-shaft has improved, and rapid progress in sinking is being made; we hope to get the said shaft down to a sufficient depth to cross-cut towards the lode at about the end of this month.

GOGINAN.—Oct. 18: The lode in the 100, going east of Gilbertson's shaft, is 5 feet wide, and will produce 15 cwts. of lead ore per fm.; the lode is very hard, which makes our progress rather slow. The lode in the 80, west of Bryn Pica shaft, is 3 ft. wide, yielding a little ore, but not to value at present. No change of importance has taken place in the cross-cut south in the 60, west of Bryn Pica shaft, since last report. But little has been done here for the last three weeks, as the men have been employed in repairing the shallow adit level, east of Gilbertson's shaft, which was broken down by the late heavy rains. This is now all right again, and the men are pushing on the cross-cut

as fast as possible. The pitch over the 100 fm. level, 50 fms. east of Taylor's shaft, is yielding 10 cwts. of ore per fm. The lode at the shaft, sinking below the 60, at Level Newyéd, is 4 ft. wide, yielding good saving work; there are six men employed at this shaft. The lode in the rise over the 60, west of engine-shaft, is 4 ft. wide, producing 12 cwts. of ore per fm. The lode in the winze sinking below the 50, or deep adit, west of shaft, is 3 ft. wide, yielding good saving work. The 60 east is suspended for the present, and the men put to sink the winze below the 50 for communication with the 60 for air and other purposes. The lode in the rise over the 50 is 3 ft. wide, producing some good stones of ore at times. All other parts of the mine are without any alteration to notice since last report.

GOLCH HILL.—Oct. 19: The lode in back of the 60 is looking very good, but irregular; it had been poor during the past week, but an improvement took place there yesterday, and it will produce 15 cwts. per fm. There a little water issuing from the vein here. The stope over the back of this level is much the same as reported last week, producing 10 cwts. of lead per fm.; driving over the back of same level is without alternation, the branch being small and cramped.

GREAT BRIGAN.—J. Tredinnick, Oct. 19: At the 57, driving east of Highburrow adeit, no lode has been taken down, but intend doing so in a few days. In the winze sinking below the 33, east of the above shaft, the lode looks very promising, and produces good stones, and I anticipate a further improvement at this point shortly. In the end driving east of cross-cut, in the 33, the lode yields a little ore, and looks more kindly. In the winze sinking below the 20, on the south, the lode has improved during the past week, and now producing good stones of ore. No change in the cross-cut north at the 20, east of Ennor's shaft. In the deep adit level, driving east of cross-cut, no lode has been taken down during the past week. We are making good progress in sinking the new shaft below, and driving west of same at the deep adit level.

GREAT DEVON AND BEDFORD (Colcharton).—J. S. Chenhall, James Richards, Oct. 20: We have just come up from underground, and found things looking very favourable, and are fully satisfied that Colcharton will make a good mine. The engine-shaft from the 40 to the 50 is sunk about 2½ fathoms, and expect to get down to the 50 in 10 weeks from this time. The cross-cut driving north in the 40 is extended from the shaft about 11 fms. 3 ft.; we have about 2 fathoms more to drive, according to the underlie of the lode, before we intersect it. The ground in the present end appears to be changing to a softer nature killas, very congenial for copper ore; our expectations are great relative to our cutting the lode at this point. The lode in the 30 west is about 2½ to 3 feet wide, composed of spar, çapel, and mundic, with good stones of ore; for the last 4 fathoms driving in this level the lode has shown every evidence of a productive lode being near, so much so that we have thought it advisable to sink a winze on its course, believing that sufficient ore will be raised to pay all expenses. The 30, east of the shaft driving on the cross-course, is about 2½ ft. wide, composed of spar or quartz, with lead and mundic—a very kindly lode indeed; we have no doubt but that this lode will make quantities of lead in depth. We have just cut into the south copper lode, but cannot say anything respecting it until further laid open. All particulars in our next report, when we hope to speak of something highly favourable.

GREAT EAST LOVELL.—J. Burgan, Oct. 20: The fine weather has enabled us to make good progress at this mine. The engine-house and boiler-house buildings will be finished in about a fortnight, should the weather prove favourable. Messrs. Derry and Co. have already delivered several parts of the engine, and as soon as the smith's shop, store-rooms, &c., are ready the engineers could prepare the engine, and get to work in a very short time. I am very anxious to get to work upon the numerous lodes, over the backs of which so much tin has been streamed for generations past.

GREAT NORTH DOWNS.—J. W. Crase, W. Jenkin, Oct. 19: The part of the lode that is being carried in the 57, driving east of Vivian's engine-shaft, is 3 ft. wide, composed of quartz, and yielding stones of copper ore—looking promising for improvement. The lode in the 57, driving west of engine-shaft, is 4 ft. wide, worth 8*l.* per fm. The lode in No. 2 winze, just commenced sinking below the 57, west of engine-shaft, is 4 ft. wide, worth 9*l.* per fm. The lode in the stopes in back of the 57 is worth 8*l.* per fm. The lode at Jenkin's shaft, sinking below the 57, is 4 ft. wide, with an improving appearance, and yielding good stones of copper ore. The lode in the winze sinking below the 57, east of Jenkin's shaft, is worth 6*l.* per fm. We have communicated Rule's shaft to the 57, on Pendarve's lode, which has given us good ventilation, and will greatly facilitate the driving east and west to open ground on said lode, which is very important, as we believe there is a great probability of opening good tribute ground in each of those ends. The lade in the 70, driving east of Sleggan's shaft, is worth 12*l.* per fm. The lode in the same level, driving west of this shaft, is worth 12*l.* per fm. The lode in the 57 end, driving west of King's shaft, is 4 ft. wide, producing stones of copper ore, but at present not sufficient to value. The lode in the winze sinking below the 57, west of the latter shaft, is worth 6*l.* per fm. The lode in the stopes in back of the 75, east of King's shaft, is worth 8*l.* per fm. The ground in the stopes in bottom of the 75, west of King's shaft, is hard, and the lode unproductive; we have, consequently, suspended these stopes, and put the men to drive the 75 west, where we believe that labour may be applied with greater chances of success. The lode in the end has improved, worth 6*l.* per fathom.

GREAT RETALLACK.—Wm. H. Reynolds, Oct. 18: We have intersected a lode in the adit end 2 ft. wide, and yielding good stones of lead; it appears to have an east and west direction, and if this is correct we shall have a considerable run on the course of it through our sett. A stone of the lead which I have had assayed yields at the rate of 39 ozs. of silver to the ton.

GREAT SOUTH CHIVERTON.—J. Nancarrow, J. George, Oct. 18: The ground in the west end is getting more settled. We are making good progress in driving. The lode is rather increasing in size, has a strong gossan, and is letting out more water than last week. In the east end fair progress is being made; the ground is a yellowish coloured killas, but appears to be gradually changing to blue. The smith's shop is nearly covered, which is a matter of importance, as it will be used as a changing-house also, for hitherto we have had no place fit for that purpose.

GREAT SOUTH TOLGUS.—J. Daw, Oct. 19: In the 154, east of cross-cut, the lode is 2 ft. wide, composed of spar, peach, and mundic. In the 154, west of cross-cut, the lode is 2 ft. wide, producing 2 tons of copper ore per fm. In the 154, west of Lyle's shaft, the lode is 4 ft. wide, worth 12*l.* per fm., for tin. In the 100, east of Noel's shaft, the lode is 1½ ft. wide, producing some very good stones of ore. All the other parts are much the same as reported last week.

GREAT TREGUNE CONSOLS.—W. Richards, Oct. 20: The men are still engaged clearing the stuff at the 92, and securing the back of the 92. There is some good ore in places to come away by-and-bye after the ground is all timbered. What has been hauled to surface already turns out some rich ore, which is being put to pile towards another sampling. The machinery continues to work well.

GREAT WHEAL BADDERN.—J. Hampton, J. Jenkin, Oct. 15: The 75 fm. level cross-cut at Hill Brothers shaft is in 11 fms. 4 ft.; the ground is of the most favourable character, and the water is issuing very strong from the end, which is being driven as fast as possible, by eight men, at the former price. The tin lode at the east of Buckley's shaft, in the bottom of the 25, is 7 ft. big, and producing good average work for tin, with every appearance of holding on, and going away in whole ground. The eastern stope is worked by eight men, at 50*s.* per fm., and the western stope by four men, at the same price. There is one pitch at No. 2 shaft, in the back of the 25, another in back of the same level at No. 5 shaft, and another in back of the 20, east of No. 9 shaft, all at 13*s.* in 1*l.* The dressing department looks favourable for the next sale of tin.

GREAT WHEAL BUSY.—John Edwards, J. Petherick, J. Tredinnick, C. Bawden, Oct. 15: There is nothing new in Harvey's engine-shaft, or in the 140, west of ditto. In the cross-cut driving south at the 140, east of Harvey's, we think we are very near the lode, as we have cut a large stream of water. The lode in the 140, east and west of Offord's shaft, is 4½ ft. wide, worth 45*l.* per fm. for tin and copper ore. We have suspended No. 1 winze at the 130, east of Offord's, in consequence of water, and have put the men to sink another winze about 14 fms. further east. No change to notice in the winze in bottom of the 130, east of Harvey's, or in the 130 east and west. The lode in Mathow's shaft is still producing good stones of copper ore. The lode in the 110 and 100, east of said shaft, is producing saving work for tin. The lode in the 90 east is worth about 12*l.* per fm. We have commenced to sink Walker's shaft below the 36.

GREAT WHEAL GRYLLS.—E. Rogers, J. Pope, Oct. 20: Michell's Lode: Michell's flat-rod shaft is down 5 ft. below the deep adit, and the ground favourable for sinking. In the deep adit level, driving west, the lode is 2 ft. wide, worth 4*l.* per fm. At surface the balance-bob is fixed in its required position, and the carpenters are engaged fixing the pulley-stands as fast as circumstances will admit.

GREAT WHEAL VOR UNITED.—T. Gill, F. Francis, S. Harris, Oct. 19: In the 100 fm. level, driving west of Ivey's shaft, the lode is about 2 feet wide, and looking very promising, but poor at present for mineral. In the 147 fm. level, driving east of Ivey's shaft, the lode is about 1¼ ft. wide, and worth 50*l.* per fathom. We have about 3 fms. further to drive this level to communicate with the 147, driven west from Metal shaft. In a winze sinking below the 147 fm. level, west of Ivey's shaft, the lode is 2½ ft. wide, and worth about 15*l.* per fathom. In the 157 fm. level, driving east of Ivey's shaft, the lode is disordered by the slide, but yielding very good stones of tin ore. We shall have 2 or 3 fms. further to drive before the lode will be free from the influence of the slide. In the 157 fm. level, driving west from Ivey's shaft, the lode is 2 ft. wide, and worth about 20*l.* per fathom. In Ivey's shaft, sinking below the 184 fm. level, the lode is about 2½ ft. wide, and worth 200*l.* per fathom. In the 184 fm. level, driving east of Metal shaft, the lode is 2 ft. wide, and worth about 20*l.* per fathom. In the 184 fm. level, driving west of Metal shaft, the lode is 1½ ft. wide, and worth 70*l.* per fathom. In the 174 fm. level, driving east of Metal shaft, the lode is 1½ ft. wide, and worth 25*l.* per fathom. In the 174 fm. level, driving west of Metal shaft, the lode is 2 ft. wide, and worth 30*l.* per fathom. In a winze sinking below the 174 fm. level, east of Metal shaft, the lode is 3 ft. wide, and worth 40*l.* per fathom. In a winze sinking below the 162 fm. level, west of Metal shaft, the lode is from 3 to 4 ft. wide, and worth 30*l.* per fathom. In the 162 fm. level, driving west of Metal shaft, the lode is 4 ft. wide, and worth 180*l.* per fathom. In the 147 fm. level, driving west of Metal shaft, the lode is about 1¼ ft. wide, and worth 40*l.* per fathom. Edwards's shaft is sunk 14 fms. below the 65 fm. level; we have but a plat at the bottom of the shaft, and we are preparing to sink it again as fast as possible; we hope to resume its sinking in the course of a day or two. Our stopes throughout the mine are looking very well. All our machinery is in very good course of working, and we hope to put the new steam-whim to work in the early part of next month.

GRIT AND STAPELEY.—Oct. 17: The lode in the 106, east of East Grit engine-shaft, is 4 feet wide, composed of spar, with spots of lead ore; looking promising. The lode in the 106, west of engine-shaft, is 2 feet wide, composed of spar and spots of lead ore, in hard ground. The lode in the rise in back of the 106 is 2 feet wide, producing stones of lead ore; this rise is being put up to meet the winze sunk 9 fms. below the 90, which is now under water; the lode in bottom of the winze is 3 feet wide, worth 18 cwts. lead ore per fm. The lode in the rise in back of the 106, east of shaft, is 3 feet wide, producing good stones of lead ore; this rise is being put up to prove the lode above the 106. The lode in the 90, west of East Grit engine-shaft, on the south vein, is 18 in. wide, with spots of lead ore, in hard ground. The lode in the 90 is 2 feet wide, showing a little ore, and discharging a great deal of water. In the winze below the 70 the lode is 3 feet wide, in soft ground. The lode in the 50, west of Fox Hall, is 8 in. wide, containing spar and a little lead ore, looking promising.

GRYLLS WHEAL FLORENCE.—E. Rogers, Edm. Rogers, Oct. 18: In the end of the 19 from surface, the lode is 3 feet wide, worth 3*l.* per fm. In the cross-cut in the deep adit there is no alteration since last reported on. At surface, the greatest part of the frames and stands are fixed for flat-rods, reservoir nearly completed, and launders fixed for conveying the water from shaft to the same. The masons are now engaged building hob-pit with all possible speed, which must be complete before we can fix the shears; so soon as that is done we shall commence fixing the pitwork.

GWYDYR PARK.—Capt. Smyth, Oct. 19: In Gwyn Llifon adit we have gone through the cross branches, and the lode has become regular again. No change in Gwydyr stopes, or middle level, since last reported. We shall take down the lode in both places next week. We are preparing to clear up No. 10 shaft. We have about 5 tons of lead for sale.

HALLENBEAGLE.—J. Edwards, E. Richards, Oct. 18: There is nothing new in any of the tutwork bargains during the past week. We shall resume the sinking of Stone's and the eastern shafts below the 40 in the coming week, where the lodes are worth respectively 12*l.* and 6*l.* per fm. for copper ore. The tribute pitches in bottom of the 40, west of Stone's shaft, have improved during the past week. We are progressing satisfactorily with the erection of the pumping-engine and also with the pitwork.

HARWOOD.—J. Race, Oct. 15: We have not yet cut the vein from the rise above the level at Scar Head; I expect they will have it soon. They have a lead or string in the rise, from which they have got some nice pieces of ore, but I am anxious to cut the vein, and this can be looked at afterwards. The end of the drift east is worth ¼ ton of ore per fathom. The stopes are rather poorer. No change at Trough Low level.

HAVAN.—G. Jones, Oct. 11: There is no change to notice at Carriston's shaft, or in the stopes above the 10, since last reported. The lode in the 10 east is not quite so productive as heretofore, worth at present about 1 ton of lead ore per fathom. The ground in the deep adit is a little more favourable for progress, and the lode has a promising appearance, showing a little ore, but not enough to value.

HAWKMOOR.—J. Richards, Oct. 18: We have cut into the lode which showed itself through the cross-course; it held for about 2 ft., and then quite disappeared. In the cross-cut north of the No. 3 lode there has been no lode discovered. We shall now commence driving south also in search of lodes. In the back of this level the lode is from 2 to 3 ft. wide, composed of capel, mundic, peach, and tin ore. The surface water is not enough for us to work the wheels.

HINGSTON DOWN CONSOLS.—T. Richards, Oct. 19: The 120, both east and west of Bailey's engine-shaft, continues to be of the same value as last reported; the eastern end 40*l.* per fm.; the western end 35*l.* per fm. The 110 west is improved, and it is now worth 40*l.* per fm. There is nothing new in any other part of the mines.

KELLY BRAY.—G. Rowe, Oct. 19: The lode in the 70 fm. level east is 2 feet wide, composed of capel, spar, and mundic, spotted with ore. The ground in the 60 cross-cut north is improved for progress, and producing some small branches of spar, spotted with mundic and ore; we calculate to have about 6 fms. further to drive in this direction to intersect the north lode, should it be found to continue its regular course, and dip as seen near the surface. The winze sunk below the 25 is down about 4 fms. below the level where we have driven east, and opened upon the course of the lode about 5½ fathoms; throughout this drivage the leader part of the lode is from 3 to 4 feet wide, worth from 25*l.* to 40*l.* per fathom. Going down in the present bottom previous to extending the winze further or sinking deeper, we purpose to stope away the ore at the foot and in the gossan, which will facilitate our proposed operations in order to resume the drivage of the 25 fm. level end. We have commenced the new ventilating and whim-shaft, which will come down about 10 fms. east of the present discovery.

LADY BERTHA.—Capts. Harpur and Metherell, Oct. 17: No change in the appearance of the lode in the new eastern shaft, sinking below the 41 east. The lode in the bottom of the 41 west continues good, composed of ore, quartz, and mundic, worth of the former 3 tons or 12*l.* per fathom. In the 30 east, we are pleased to inform you, we have just cut the cross-course; so far as seen it is composed of peach, mundic, prian, quartz, and stones of lead and yellow copper ore—presenting very favourable appearances, and letting down a large stream of water. We have no change to inform you of in any other part of the mine.

— Capts. Harpur and Metherell, Oct. 20: We have no particular change to inform you of in the appearance of the lode in the new eastern shaft, sinking below the 41 east, composed of quartz, mundic, peach, and stones of ore. The lode in bottom of the 41 west is about 3 ft. wide, composed of ore, mundic, peach, and quartz, worth of the former 3 tons, or 12*l.* per fm. In the 30 east the men have been engaged since our last report in fixing in timber, the ground being soft and troublesome, which is now completed, and the men have again resumed the cutting into the cross-course, which is bearing a little to the east of south, and underlying west, composed of mundic, prian, peach, intermixed with yellow and black ore, presenting very favourable appearances, and letting down a quantity of water; as soon as it is cut through we will send you further particulars. In the cross-cut driving north of the 10 east we have cut a small branch, composed of quartz, peach, and mundic, and letting down a little water.

LANIVET.—J. Tregay, Oct. 15: Vahce's Lode: East of the cross-course, at Oulton's shaft, we cut in north, and find the lode here to be about 3 or 4 ft. wide, and producing good stones of tin. We have driven south 3 fathoms, and cut a lode; we cannot tell its size, as we are not through it, but so far as seen it is looking very kindly, and we saw good stones of tin so far as we cut into it. At this shaft west the lode is producing stones of tin, and promising an improvement. At Petrie's shaft the branches are producing saving work. The lode in the bottom of the account-house shaft is producing good work for tin.

MAUDLIN.—W. Tregay, Oct. 15: We have commenced driving east at the 70, where the lode is very large, and producing quartz and mundic. We are driving a cross-cut in the 70 west end to prove the north part of the lode.—Coombe: No change to notice.

MERLLYN.—W. Sandoe, Oct. 19: In the 30, driving north from shaft, the lode is of a promising character, but producing only a slight mixture of ore at present. The stope in the back of this level is worth about 6 cwts. of lead ore per fathom, and looks pretty well. In driving west on the new lode, in the 20, we have a little ore, and the lode looks very promising, and which, I hope, will soon improve. The stopes in the back of this level, on the north branch, looks better to-day than for some weeks past, and will now produce 7 cwts. of lead ore per fathom. On the whole, the mine looks as well as for some time past, and everything is being pushed forward with the utmost energy. The 6 tons of ore sold last week are sent off, and we shall endeavour to prepare another small parcel for sale as quickly as possible.

MINERA UNION.—Wm. T. Harris, Oct. 20 Brabner's Shaft: The lode in the 80 north is now more compact, with a rib of lead ore on the hanging side, which is very promising. The level south from the top of the rise has reached the old workings, and is abandoned, and a cross-cut commenced to drive west, in which we get occasional stones of lead. The pitch north of No. 1 winze is worth 1¼ ton of lead per fathom. The level south from the winze, in bottom of the 60, produces stones of lead, and I am daily expecting an improvement.

NANT-Y-IAGO.—J. Roach, Oct. 15: The mine is gradually improving. The rise above the 20 west is worth 10*l.* to 12*l.* per fm.; and the stope under the 10 is worth full 12*l.* per fm. Other points in operation are a little better than when last reported. There is a branch of lead ore making its appearance in the 30 west. We shall commence sending off a parcel of lead ore on Monday next. I have forwarded samples of about 120 tons of blende to the Baglit Spelter Company, as directed.

NETHER HEARTH.—W. Vipond, Oct. 15: We have the vein, or rather two veins, now in the level 5 feet wide, in the hazle, and a good deal of kindly looking mineral. There ought to be a change now, when we rise into the limestone. We have also cut an east and west vein in the drift from the old shaft, but as we only saw it yesterday I am not able to say much about it yet.

NEW CHIVERTON.—J. Trewartha, Oct. 7: The engine-shaft is now 15½ fms. below the 30, and still in a beautiful channel of ground; we have a small branch in the shaft about 2 in. wide, composed of spar, mundic, blende, and lead, underlying towards the lode, the mining term of which is a dropper or feeder of the lode. We have sunk through our branch before this about the same size and nature, of the same bearing and underlie; those branches are of the same bearing as the lodes, but underlying in the opposite direction, which is a good indication of the lode being productive where those branches intersect the lode. The 30, driving east on the south lode, is driven 20 fms. east of sump cross-cut, and within 6 fathoms of the east shaft, but the lode is small and poor. In the 20 end, going east, the lode is not looking so well as last week. We have a pretty branch of lead in No. 1 stope dipping east before the end; it is dipping away in whole ground, and will certainly lead to something good by-and-bye. In No. 2 stope we have a very good lode, chiefly blende, and worth about 3 tons of blende and 2 cwts. of lead per fathom.

NEW CORNISH MINES.—J. Richards, Oct. 20: Latchley Consols: The 40 has been driven 1 fm. 1 ft. 3 in.; the lode is large, 3 ft. wide, and consists of mundic, capel, and good stones of ore occasionally. In the bottom of this level (the 40) two stopes are being worked, one to the east and the other to the west of Sleep's winze; the lode in the former is worth 3 tons, and in the latter 2 tons of copper ore per fm. In the back of this level (the 40), about 30 fms. east of Sleep's winze, a rise has been commenced; it is up 1 fm. 3 ft., the lode in which is 4 ft. wide, and worth 1 ton of copper ore per fm. The rise in the back of the 20 east is up 2 fms.; the lode is 3 ft. wide, and continues to be worth 3 tons of copper ore per fm. At the South Wheal Maria the 82 has been driven east and west 6 ft. in each direction. In the eastern drivage the lode is 3 ft. wide, and and yields a little ore. In the western end the lode is increasing in size, being at present 3½ ft. wide, and promising, composed of a large quantity of mundic, quartz, and good stones of ore. In the 70 west the drivage is being continued by the side of the lode in tolerably favourable ground for progress. At this level (the 70) the men are still engaged stripping down the lode, which will be completed in the course of next week, when sinking and rising will be commenced, as advised in my last report. It will be seen from the foregoing that the different points continue without much alteration, still maintaining their promising appearance. We sampled on the 30th ult. (computed) 87 tons of copper ore for sale this day. The whole of the machinery throughout the mines continues to work well.

NEW LAXEY.—J. Horsley, Oct. 18: The lode in the shaft continues much the same as usual, from 3 to 4 ft. wide, and is still quite strong and kindly, with nice lead mixed through the vein, worth 2 tons per fm. for the length of the shaft. The lode in the 60 fm. level end improves in width; we have a strong lode now about 4 ft. wide, composed of quartz, spar, &c., with small ribs of jack, and a little lead mixed through the vein, worth about ½ ton per fm. The lead in the 60 backs is worth about 12 cwts. per fm.

NEW ROSEWARNE.—E. George, Wm. Mitchell, Oct. 19: The lode in Bickford's shaft is 7 ft. wide, and worth 20*l.* per fm. for tin and copper. The lode in the 74, west of Bickford's, is 6 ft. wide, worth 25*l.* per fm. for tin. The stope in back of the 67 is worth 35*l.* per fm. The lode in the 67, west of Bickford's, is 3 ft. wide, producing good stones of tin and copper, but not to value. The stope in back of the 67 west is worth 10*l.* per fathom. The lode in the 58 west is 3 ft. wide, producing a little tin. The two stopes in the back of this level are each worth 20*l.* per fm. The lode in the 46, west of Bickford's, is small, but producing a little copper ore. There is no change in the 34, west of Bickford's, since our last report.

NEW TRELEIGH.—S. Michell, Oct. 20: I beg to say, in reference to our operations and prospects in the mine, that they are without any material alteration for the past week. No lode has been taken down in the 80, west of Carr's engine-shaft, or in the rise in back of the same level for some days past, but so far as it is desued I do not think in either of them the lode is inferior to what it was reported last. The rise is worth 10*l.* per fm.; and the end 2 tons of ore per fm. We are cutting through the lode in the 90, west of shaft, but have not reached the north wall. The winze below the 70 is looking a shade better. Nothing has been done in the 60 for the week. The men have been employed cutting down and timbering the new shaft from surface to adit; the ground in this shaft, sinking below the adit, is very favourable, and the lode promising. The gossan appears to be giving place to blende and yellow copper ore, with spots of silver-lead intermixed. We consider this highly encouraging.

NEW WHEAL MARTHA.—Henry Rickard, George Rickard, Oct. 20: The north part of the lode, in the 86, is divided from the south by a horse of killas; this is a frequent occurrence in most of our productive operations throughout the mine; worth at present 10*l.* per fathom. The north part of the lode, in the 74 west, is producing good stones of ore, with a kindly appearance. We have communicated the winze with the 64 west, and commenced driving on the lode, which is worth 6 tons, or 18*l.* per fathom. The two stopes in the bottom of the 52 are equal in value as last week—80*l.* per fathom. We are making good progress in driving the 40 west towards the cross-course; this is a most important point to accomplish, as the lode in the winze now sinking below the 20 is a fine course of ore, worth 40*l.* per fathom for its length (9 feet); this being quite a new shoot of ore. The lode in the 20 west is improving as we progress in driving, worth from 10*l.* to 12*l.* per fathom. The stopes in the back of this level are worth from 25*l.* to 30*l.* per fathom. The tribute department is looking well. The boiler-house walls are nearly up, and the woodwork for the same is in a forward state. All surface operations are progressing favourably.

NEW WHEAL ROSE.—J. Middleton, J. Hammill, jun., Oct. 20: In driving on the course of the north and south lode, from Burrow's shaft, we find the change is not attributable to any influence, as we last week reported, from the intersection of the Rose Cliff Mine; but we are glad to say the lode presents a more favourable appearance as we drive southward.

NORTH CHIVERTON.—J. Hampton, Oct. 19: The deep adit level has been driven for many fathoms through a good and profitable lode for lead and blende. We have just taken up some good stones of lead from a branch forming itself into a leader on one side of the lode in bottom of the end. The old engine-shaft is a little troublesome for clearing up, but in all probability we shall soon be down to the first level below the deep adit. One of the blende stopes is not so good, whilst another is better; the average yield, however, is as good as at any former period. The winze in bottom of the 12, about 21 fms. below surface, on Shepherds lode, contains more lead, and is now worth for both lead and blende 6*l.* 10*s.* per fm. The ground in the new engine-shaft is very good, and highly mineralised. The dressing operations are going on satisfactorily.

NORTH DEVON.—J. Blamey, Oct. 20: Caunter Lode: The operations on this lode at present consist of a rise above the adit and a winze sinking below it, and the same at the 10 fathom level. At each of these four points, and also in the ends not at present driven, this lode is looking remarkably well. The ore in the rise in back of the adit is in places 8 in. wide; it is worth 15*l.* per fm. In sinking below the adit it is still better worth 18*l.* per fm. The rise above the 10 is worth 12*l.* per fm. The winze sinking below the 10, which is down about 4 fms., is still very rich, and the ore continuing very regular; but, as this winze is sinking on the extreme north edge of the rich ore ground, and the ore dipping south, I prefer lengthening the winze by taking away 3 or 4 fms. at the south end, and then resume the sinking further south; the lode is worth 100*l.* per fm. The 20 is being driven towards the caunter as rapidly as possible; but, as that lode is becoming more upright, it will, perhaps, take two or three weeks longer to intersect it. The 30 is also being driven towards the caunter, which it will intersect in a few weeks; the end in this level is producing good stones of ore. The stope below the adit, on the middle lode, is still worth 1¼ ton, or 18*l.* per fm. In the winze below the 20, on the middle lode, now down 9 fms., a slide has come in from the north-east, which has entirely cut off the ore for the time, but I hope soon to meet with it again; this winze has produced about 2 tons per fm. for the whole depth. The dressing department is going on well; we hope to have 50 tons ready for the next two-monthly sale. The new 12-inch lift works well, and raises a large volume of water, so that we shall in future have a most ample supply for dressing purposes, without any cost.

NORTH DOLCOATH.—J. Vivian, J. Paull, Oct. 8: The engine-shaft is now down 9½ fms. below the 70; the lode is over 6 ft. wide, producing good stones of copper ore; the ground rather harder than usual, which we think is likely to have a good effect on the lode. In the 70 west we have intersected the cross-course, and driven 2 fms. south on it, where the ground is favourable for driving, and congenial for miners).

NORTH DOWNS.—Francis Pryor, John Grenfell, Oct. 19: The 85 to drive east of King's shaft, by six men, at 12*l.* per fathom. The same level to drive west of King's, by four men, at 10*l.* per fm.; there is no change to notice in this level since last report. The 60 to drive east of Bennetts's shaft, by two men, at 7*l.* 7*s.* per fm.; the lode in this end is presenting a better appearance than it has for some time past, and producing good stones of ore. The 30 to drive west of cross-cut, at Bennetts's, by two men, at 8*l.* 18*s.* per fm.; here we have just passed through the western part of Bennetts's cross-course, which heaved the lode about 4 ft., we are, therefore, anxious to see the lode a little way off the cross-course, as the main lode produced large quantities of ore in that direction. —South Lode: A rise in the back of the 60, by three men and three boys, at 7*l.* 15*s.* per fathom. We are pushing on this rise as fast as possible to ventilate the level above, as well as to open tribute ground. The 50 fm. level cross-cut to drive south at King's, by six men, at 7*l.* per fm. The 50 to drive east of cross-cut, on the south lode, by three men and three boys, at 7*l.* 5*s.* per fm.; this end is opening up good orey ground, and worth 14*l.* per fm. A stope in the back of this level, by six men, at 5*l.*; the lode is worth 11*l.* per fm. Also nine tribute pitches, to eighteen men and four boys, at 13*s.* 4*d.* tribute.

NORTH GREAT WORK.—J. Vivian, J. Pope, jun., Oct. 14: The following is today's setting:—The south lode in the deep adit, east of Thomas's shaft, is 6 inches wide, good tinny work; set to drive by two men, at 6*l.* per fm. The north lode in the shallow adit, east of Vivian's shaft, is 20 in. wide, very much improved in appearance, and worth about 8*l.* per fm.; set to drive by two men, at 4*l.* per fathom. The caunter lode in the shallow adit, north of Vivian's shaft, is 2 ft. wide, worth about 4*l.* per fm.; set to drive by one man and one boy, at 2*l.* 5*s.* per fathom; in the same level south the lode is still standing for about 4 ft. behind the end; we will report on it when taken down; set to drive by four men, at 9*l.* per fm. The same lode in the pump shaft, sinking below the old workings, is 2 ft. wide, worth 4*l.* per fm.; set to sink by two men, at 3*l.* 10*s.* per fm. In the deep adit, south of Parson's shaft, we have not yet met with the lode, but as the end is letting out pretty much water, we think we are near it; set to drive by one man and one boy, at 3*l.* per fm. We have placed six men to continue sinking the new eastern shaft on the north lode, which we had been obliged to suspend owing to the water. We hope to hole to the adit in the course of next week, after which, as the water is very low at present, we shall sink below the adit, where the lode has gone down very good for tin. The season having proved hitherto so dry that few men living can remember its equal, our operations at the stamps have been continually going less from want of water, and in the past month we have not been able to return our tin. Having, however, a large stock of tinstuff on the floors, we hope to make good sales as soon as the winter rains shall give us a fair supply of water power.

NORTH MINERA.—Oct. 20: We have stopped the level driving upon the first lode cut in the cross-cut at the 40 north, as we have lost all signs of a lode, and have put the men to drive west upon the main lode at the same level, which is looking very kindly, and is composed of limestone, carbonate of lime, sand, spar, and stones of lead ore; set to four men, at 4*l.* per fm. The tribute pitch in the bottom of the 15 west is looking very well, and will produce from 1 ton to 25 cwts. of lead ore per fm.

NORTH SHEPHERDS.—H. Bennetts, Oct. 19: At Decimus engine-shaft the ground is changed for the better, and we hope to make a little better progress in sinking; the shaft is sinking in a good-looking country for lead. In the 20 end, driving west of engine-shaft, the lode is improved in size and character, and is now looking a very promising lode indeed; it contains soft spar, mundic, and a little lead, but not enough to value. In the 20 end, driving east of engine-shaft, the lode is 1¼ ft. wide, composed of flookan and a little blende. At the adit shaft, sinking below the surface, the ground is much the same for sinking in as for some weeks past. The engine and other machinery is working very well indeed.

NORTH TRESKERBY.—R. Pryor, J. Tregoning, T. Jenkin, Oct. 20: The lode in the engine-shaft, sinking below the 100, is without alteration since our last report.—Treseder's Shaft: The lode in this shaft, sinking below the 100, is 3 ft. wide, producing stones of ore, a kindly lode. The lode in the 100 end, east of shaft, is not quite so good; now worth 16*l.* per fathom; we have driven this level full 24 fms. in a good course of ore, which speaks well for the bottom level; the lode in rise in back of the level is worth 30*l.* per fm. The lode in this level, west of shaft, is still opening up tribute ground. The lode in the 77, east of shaft, is divided into two parts, which has lessened its value; but, judging from appearances, we think it will shortly resume its former value. No change in any other part of the mine since our report for the meeting.

NORTH WHEAL BASSET.—G. Davey, Oct. 19: Tutwork Setting: On Friday last the following bargains were set:—Main Lode: Grace's shaft to sink under the 112 fathom level, by nine men, at 54*l.* per fm. The 112 to drive west of Grace's shaft, by four men, at 5*l.* 15*s.* per fm. The winze to sink under the 102, by four men, at 6*l.* 10*s.* per fathom. The 20 to drive east of Grace's shaft, by four men, at 3*l.* 10*s.* per fm.; the lode is 2 feet wide, composed of spar, gossan, and a little copper ore. The 20 to drive west, by two men, at 4*l.* 10*s.* per fm.; the lode is 2½ ft. wide, yielding good stones of copper ore.—South Lode: The 102 to drive west west of the cross-cut, by four men, at 4*l.* 5*s.* per fm. —North Lode: The 32 to drive east of Grace's shaft, by four men, at 3*l.* 10*s.* per fathom; the lode is worth 16*l.* per fm. for copper ore. The rise in back of the 32 by two men, at 5*l.* 5*s.* per fm. The 20 to drive east of Grace's shaft, by four men, at 5*l.* 10*s.* per fathom; the lode is 18 in. wide, producing 1 ton of copper ore per fm. The 20 to drive west, by four men, at 4*l.* 10*s.* per fm. The 42 cross-cut to drive north of Grace's shaft, by four men, at 5*l.* 5*s.* per fathom.

OKEL TOR.—W. B. Collom, W. Metherell, Oct. 17: In the 80 fm. level, as reported last week, we have cut through the main part of the lode, and reached the south capels. The men are now driving east again, and from the appearance of the lode in the end, with vughs making in it, accompanied with stones of ore, it is very promising for making a productive lode. William's pitch, in the back of the 80 fm. level, is very throughout, and yielding 3 tons of ore per fm. In the 65 end we are rising against Northey's winze sinking under the 50 fm. level; the lode in the rise is full 3 ft. wide, and will yield 6 tons of ore to the fm. In the bottom of the 65 fm. level we have commenced a winze to communicate with William's pitch in the back of the 80 fm. level. Gourd's pitch, in the back of the 65 fm. level, will yield 4 tons of ore to the fm. The ground here is very hard for breaking. The ground in the 50 fm. level cross-cut south is favourable for driving, and the water is issuing very strongly from the end: this gives a strong reason for supposing that the water is coming from a south lode. The cross-cut is driven 7 fms. Peardon's stopes, in the back of the 50 fm. level, are suspended in consequence of their becoming unproductive; Spear's stopes are suspended for the same reason. Bowden's, or new stopes, in the back of the 50 fm. level, will yield 4 tons of ore to the fm.; Dawe's stopes will also yield 4 tons of ore to the fm. In Northey's winze we are sinking by the side of the lode, and shall continue to do so until the winze is communicated with the rise from the 65 fm. level. There are 9 ft. more to rise, and sink to communicate. Odger's pitch, in the back of the 50, will yield 3 tons of ore to the fm. In Knight's pitch, in the back of the 50, we have put a pare of men to cut south into the lode, and we are discovering a good lode of ore, but we cannot as yet state its value. The lode in the 40 fm. level is improving, and will now yield 4 tons of ore per fm. This improvement taking place in the 40 fm. level, and the near communication of Northey's winze, will place the mine in a good position, and more than compensate for the falling off in the two stopes in the 50 fm. level.

PEDN-AN-DREA UNITED.—W. Tregay, T. Delbridge, Oct. 15: Sump: In the 130 east end the lode is worth 20*l.* per fm. In the 130 west end the lode is worth 6*l.* per fathom. In the 130 north cross-cut we have intersected another branch, producing occasional stones of low quality tinstuff; these branches appear to be all converging with the lode going west, consequently the extension of our 130 west end will again intersect them; since this report it will not. The 120 east rise is worth 3*l.* per fm. The 110 east end is worth 5*l.* per fm. The 110 west end is worth 10*l.* per fm. The 110 west winze is worth 12*l.* per fm. The 100 west end is worth 3*l.* per fm. The 100 west rise is worth 3*l.* per fm. The 90 west end is poor. The 90 west rise is worth 9*l.* per fathom. —Cobbler's: The 90 east end is worth 6*l.* per fm. The 90 west end is worth 9*l.* per fm. The 68 east is poor. The 68 west is worth 7*l.* per fm. The 68 west rise is poor.

PRINCE OF WALES.—Wm. Gifford, Oct. 18: In the 30 fm. level, west of Watson's shaft, we have taken down the lode, being 2 ft. wide, composed of capel, spar, and peach, with occasional stones of yellow copper ore. About 2½ ft. north of the same lode, we have a branch from 6 to 8 inches wide, composed of yellow copper ore and peach—good work for dressing; the same promises a further improvement. In the 30 fm. level, east of Watson's shaft, we have not taken down any lode since last report.

PROSPER UNITED.—S. Lean, W. H. Martin, Oct. 20: The lode in the 80, east of Louisa's shaft, north of the elvan, is 2 ft. wide, of a very kindly appearance, containing some tin, but not sufficient to value. The 80 west is 2½ feet wide, containing saving work for tin. The lode in the 70 west is 18 in. wide, composed principally of spar, with occasional stones of tin. The lode in the 60 west is 2½ feet wide, composed of mundic, peach, and stones

ROSEWARNE UNITED.—T. Richards, E. Carthew, Oct. 20: The lode in the 50, east of engine-shaft, contains occasional stones of yellow copper ore. The lode in the 50 west of engine-shaft, contains a little good black and yellow copper ore. The lode in the 60, west of engine-shaft, contains stones of black copper ore. The lode in the winze sinking below the 30, west of boundary, is worth 20*l.* per fm. for copper ore. The lode in the rise in back of the 20 is worth 10*l.* per fm. for copper ore.

SOUTRIDGE CONSOLS.—J. Richards, Oct. 19: In the 50 cross-cut south good progress has been made, and the ground still continues easy for progress. In Doidge's rise in back of the 50, west of the ventilating shaft, the lode continues 4 ft. wide, consisting of an abundance of mundic, capel, prian, and occasionally a little ore of good quality. In the 40 east, and east of John's cross-cut, on No. 1 south lode, the lode is from 2 to 3 feet wide, containing gossan, mundic, capel, and a little ore. In the 20, east of the engine-shaft, on the south part of main lode, the lode is 1 ft. wide, composed of mundic, peach, quartz, and a little ore. In the deep adit level east a cross-course has been intersected, on the eastern side of which the lode is not yet met with; up to point of intersection the lode is large, 3 ft. wide, and consists of mundic, gossan, capel, and quartz—very promising.

SOUTH BULLER.—J. Hosking, Oct. 15: The 24, east of engine-shaft, continues hard and spare for driving; the lode is 6 inches wide, composed chiefly of quartz and peach. In consequence of water having risen to the 24, in Hodge's shaft, it has become more at the engine-shaft, by which means the consumption of coals will now slightly increase.

SOUTH CARADON WHEAL HOOPER.—W. C. Cock, Oct. 15: The ground in the 54 cross-cut south is a little harder than when last reported. The 54 west, on No. 2 south lode, is without any change to speak of. In the end east on this lode the lode has become very small. The same remark applies to the 54 east, on No. 1 south lode. The ground here at the present time, although in every other respect of a most beautiful description for producing copper ore, is rather too soft; I hope to see it more firm soon, when I have no doubt the lode will present a better appearance.

SOUTH CARN BREA.—Isaac Richards, Oct. 19: The lode in the flat-rod shaft is 2 ft. wide, composed of capel, quartz, mundic, and good stones of tin ore.—Flat-rod Shaft: The lode in the 118 fm. level east is 4 feet wide, and worth 10*l.* per fm. In the 118 fm. level west the lode is 2 feet wide, composed of capel, peach, mundic, and tin ore—saving work. The lode in the 108 fm. level east is 4½ feet wide, and consists of capel, quartz, peach, a little tin, and good stones of copper ore. In the 108 fm. level west the lode is 2½ feet wide—unproductive. In Williams's cross-cut north, in the 108 fm. level, the ground is not so favourable for exploring as for some time past. The lode in the 98 fm. level east is 4½ feet wide, composed of capel, peach, quartz, mundic, good stones of copper ore and tin, worth 8*l.* per fathom. In Adams's winze, in the bottom of the 98 fm. level, the lode is 4 ft. wide, composed of quartz, capel, mundic, and tin ore, worth 8*l.* per fathom. In the 40 fm. level west the lode is 3 feet wide, composed of quartz, peach, prian, and tin ore—saving work. The lode in the 30 fm. level west is 2 feet wide, composed of gossan, capel, quartz, prian, a little tin ore, and good stones of black oxide of copper.—New Shaft: In Piper's winze, sinking in the bottom of the 88 fm. level east, on No. 1 north lode, the lode is 4 feet wide, composed of capel, peach, mundic, and tin, worth 4*l.* per fathom.

SOUTH CONDURROW.—Joseph Vivian, Oct. 19: I beg to hand you the following report of this mine, with details of progress made since the meeting, held in February last:—Dunsford's or engine-shaft, has been sunk vertically to 2 fms. below the 20 under adit; adit 26 fms. deep. Vivian's shaft has been sunk on West Basset lode from surface to the 20 below adit. The adit has been driven east of said shaft 60 fathoms and west 40 fms.; the 10 fm. level 18 fms. east and 15 fms. west; the 20 fm. level 10 fms. west, and a cross-cut south 20 fms. The shallow adit has been opened about 50 fms. in the western part of the mine, exploring the different lodes, and crossing north and south of West Basset lode. A shaft has been communicated with the adit, 60 fms. east of Vivian's shaft; skip-roads have been completed to the bottom at Dunsford's and Vivian's shafts; walls for smiths' shop and temporary counting-house have been built, with various other work, and I have pleasure in saying that the engine and pitwork, &c., are all in complete order of working, so that the ground may now be laid open rapidly. In sinking Dunsford's engine-shaft between the adit and 20 fm. level we have passed through two kindly lodes underlying north, which we shall cross to in the 20 very shortly. We have a kindly lode just now passing through the shaft, which is also underlying north. In the 20 east on this lode, now 8 fms. from shaft, the lode is about 2½ ft. wide, worth about 10*l.* per fm. for tin.—West Basset Lode: In the adit end, west of Vivian's shaft, the lode is about 3 ft. wide, composed of very kindly gossan, with tin that will be stamped at a profit. In the same level, east of new shaft, the lode is about 2 ft. wide, composed of irony gossan, with occasional sprigs of rich copper ore—a kindly lode. In the 10, east of Vivian's shaft, the lode is about 2 ft. wide, good gossan, and worth about 5*l.* per fm. for tin. In the same level, west of said shaft, the lode is the same size as in the eastern end, composed of irony gossan, and producing occasional stones of copper ore. In the 20, west of the same, the lode is about 3 ft. wide, worth about 10*l.* per fm. for copper and 4*l.* per fm. for tin. From this end and back we have to-day sampled 19 tons of copper ore, producing 14 per cent. In the 10 cross-cut, south from Vivian's shaft, we have met with a kindly lode, and have set the men to drive east on it. We intend, without delay, to drive the 20, east of Vivian's shaft, and in the course of about a week we shall commence to drive a cross-cut south of the same, for the purpose of intersecting the lode alluded to above; and, if we find it improved pretty much, we intend to sink on it, and, if perfectly dry, most probably we shall carry down a permanent shaft on this lode, for the purpose of opening up the south part of the mine with rapidity and economy. But if, on the other hand, we meet with water, it may be wise, should present prospects continue, by-and-bye, to sink a new shaft on West Basset lode of sufficient size for pumping and drawing through. It is, however, a matter for future consideration whether we shall carry out our work on this plan, or wait for cross-cuts from Dunsford's shaft. West Basset lode is only about 40 fms. south of Dunsford's shaft, and underlying north about 9 inches per fm.; and there are two lodes between also underlying north, which may prove as productive as the others alluded to. By estimate we have 5 tons of tin at surface, and we have a large quantity of ground laid open for stoping, so that as soon as the water increases sufficiently to keep the stamps going we shall be in a position to make bi-monthly sales, which, with the copper ore we may expect to raise, will considerably help the working cost. We have taken an eight-head stamps very near the mine, at 24*l.* per year, for four years. We have at present employed on the mine 39 men and 6 boys sinking, driving, and stoping; 10 men at surface, including engineman, mechanics, and other labourers, and 1 man and 9 boys and girls at the stamps.

SOUTH CRENVER.—E. Chegwin, Oct. 18: In the adit end, driving east and west of cross-cut, on the north lode, the lode is 6 inches wide, producing quartz, gossan, and spots of copper ore.

SOUTH DARREN.—J. Boundy, Oct. 17: The lode in the 50 west is 2 ft. wide, producing good stones of lead and copper ore, and is letting out a plenty of water, presenting very favourable indications of soon becoming much more productive. The lode in the 40 and 30 west is about the same in character and value as reported on last week. We have holed the winze below the 40, which has well ventilated the 50 west. In the 50 west cross-cut north we have cut into the lode about 2 ft.; it is composed of a good clay-slate, carbonate of lime, lead, and copper ore, valued at 8*l.* per fm., and promising a further improvement. No other change to notice in any of our tutwork operations. We sampled on Friday last (computed) 33 tons of copper ore.

SOUTH DOLCOATH.—W. Roberts, Oct. 19: In the 70, driving east on the caunter, the lode is nearly 1 ft. wide, producing occasional stones of ore. In the flat-rod shaft, sinking below the 36, the lode is 1 ft. wide, yielding about 1 ton of ore per fm.; in the same level, driving east, the lode is 1 ft. wide, at present unproductive. In the 20 west the lode is 1 ft. wide, producing good ore, about 1 ton per fm.

SOUTH EXMOUTH.—J. P. Nicholls, G. Maunder, Oct. 18: The engine-shaft has been sunk 5 fathoms during the past month, the ground in which is still favourable for progress and congenial for the production of lead. The 75 south has been extended 14 fathoms from cross-cut, the lode averaging 2¼ ft. wide, chiefly consisting of quartz, barytes, and white iron, and yielding occasional stones of lead ore. The 75 north has been extended 17¼ fathoms from cross-cut; the greater part of this drivage has been through disordered ground, but has now become more settled, and the character of the lode decidedly improved, and will at present yield 8 cwts. of lead per fm. The winze sinking in bottom of the 45 to ventilate the 60 is down 5 fathoms; the lode is larger than the width of winze; the part being carried consists chiefly of white iron. The 45 north has been extended during the past month 12 fathoms; throughout this distance the part of the lode carried has presented the most favourable indications, and at times has yielded from 3 to 4 cwts. of lead per fathom. We have men now cross-cutting through the lode just behind the end, where the lode has been opened to 12 feet wide, but no east wall reached; it consists of friable quartz, spar, and gossan, impregnated with spots of blende and lead ore. The lode in the 30 north consists chiefly of gossan, producing occasional squats of ore.

SOUTH GRYLLS.—J. Richards, Oct. 19: We have in the past week been making preparations, and are now driving west of Symons's shaft, on the north lode. The ground is favourable for driving, and on commencing to drive on this lode it was small and unproductive for mineral. We have now driven about 5 fms. on it, and within the last week the lode has improved in size, which is at present 2 ft. wide, and become productive for both tin and copper, and has an improving appearance. There is a long piece of unwrought ground ahead of this adit end on this lode, which, from present view, is likely to afford some good tribute ground, and prove profitable to the company.

SOUTH LOVELL.—W. Chappell, Oct. 20: Our progress is slow in forking the water, owing to the lodes being worked away for a great length. I shall be able to let you know more by Saturday how we are getting ahead, but in consequence of the water not being out, I cannot send you the promised plan of the workings, &c., till next week.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Oct. 15: There is no change in the rise above the adit west or the new shaft since our advice of Saturday.

SOUTH WHEAL TOLGUS.—Oct. 19: Youren's Lode: At Michell's engine-shaft, sinking below the 150, the lode is 2 ft. wide, consisting of peach, mundic, and spar. The lode in the 130 east is 2 ft. wide, composed of mundic and spar. In the 150 west the lode is 1 ft. 8 in. wide, composed of peach, mundic, spar, and good stones of ore—a very promising lode. In the 130 west the lode is 1 ft. wide, not looking so well as when last reported, producing stones of ore. The lode in the winze sinking below the 130 west is 20 in. wide, producing 2 tons of ore per fathom. We have four stopes over the 130 west working by 24 men, each stope yielding 3 tons of ore per fm. In the 120 west the lode is 15 in. wide, producing 1 ton of ore per fm., and promising for improvement. The stope west of winze, in bottom of the 110 west, is producing 2 tons of ore per fm. In the 90 west the lode is 1 ft. wide, consisting of spar and mundic.—New South Lode: In the 66, driving east from the rise, the lode is 18 in. wide, opening tribute ground—a kindly lode.—South Lode: In the 140 east the lode has not been taken down since last reported on. In the 130 east the lode is 2½ ft. wide, consisting of spar and peach, with stones of tin. The lode in the 120 east is 1 ft. wide, unproductive. In the 110 east the lode is 18 in. wide, chiefly consisting of flookan and soft spar. The lode in the 100 east is 3 ft. wide, at present unproductive. The lode in the stope in bottom of the 100 east is worth for tin about 10*l.* per fm.

ST. DAY UNITED.—F. Fryor, J. Cock, J. Gilbert, Oct. 15: We have nothing new to communicate to-day, with the exception of the lode in the 20, west of Williams's shaft, at East Wheal Maid, where it has very much improved, now being worth fully 12*l.* per fm. for tin and copper.

ST. IVES WHEAL ALLEN.—John Nancarrow, Joshua Daniel, Oct. 19: We have reached the lode in the 40 west, where it is composed of peach, tin, capel, and quartz; it has a very good appearance, and is worth 6*l.* per fathom. The lode in the 40 east is larger than usual, and yields tin to save. The 20 west is unproductive; the stope in the back is worth 6*l.* per fathom; the winze below the level will produce tin to save. The winze below the 20 east yields a little tin; the east stope, below this level, is worth 6*l.* per fathom; the middle stope is worth 5*l.* per fathom: the west stope is worth 3*l.* per fathom. The stopes at Charles Frederick's is worth 5*l.* per fathom. Our prospects are, on the whole, improved.

ST. JUST CONSOLS.—W. Williams, Oct. 18: The Guide lode never looked better than just now. Another branch or lode has intersected it, and in the deep adit we have a lode mixed with tin throughout for 10 feet in width. I have taken the advice of Captain Carthew, who recommends sinking a winze with all speed below the deep adit level; this we shall do as soon as we can get things in order. At the engine-shaft, on Cudley's lode, we have been cutting plat and fork. I hope next week to be extending the 20 fm. level east and west on this lode. We are breaking a good quantity of tinstuff. The mine is very much improved.

ST. JUST UNITED.—John Carthew, Oct. 19: There is nothing this week calling for particular remark. I am glad to say that in every part the mines are looking as well as when last reported on.—Saveall's Lode: The 62, east from engine-shaft, still looks well; the lode in the end is 3 ft. wide, worth 100s.; driving for 70s. per fm.; and the backs over can be worked for 35s. per fm. The 62, west of the shaft, has now got into the killas; lode large and very kindly. The tribute pitches over the 63 and 50, on this tribute ground. We are driving by the side of the lode, which we shall take down by is looking better; the stuff now breaking in this end is worth 5s. per sack. The 40 north is worth 60s. per fm.; driving for 50s.; and the 40 south is worth 150s.; driving for 55s. per fm. We think this end is in a good run of tin ground. No level as yet under this. Last week the piston-rod of the large engine broke, and so damaged the piston that we were obliged to have a new one; this stopped our stamping for four days. We are now working first-rate. I shall have a good lot of tin this month, but the continued low price is most distressing.

TIN HILL.—J. Martyn, Oct. 19: We are now stoping the back of No. 3 lode, from which we have some splendid work. We are now sinking the engine-shaft, to get ready for the engine. The engine-house will be ready for the engineers in a week, if the weather permits. All other things are going on well. We have had some gentlemen here inspecting the mine and sampling the work. They are highly pleased with the work from the deepest lodes.

TORBAY HEMATITE IRON.—S. Paul, Oct. 19: The end driving east from new shaft is at present unproductive; the ground speedy for exploration. The end driving west is of a most kindly description, and we daily expect a course of iron, the matrix being everything congenial for iron ore. The stope below the Derrick level is still producing a fair quantity of iron of high percentage, and we intend to commence a winze rate quantity and good produce, and from this ground we expect a large quantity of iron. The shallow stope from the new cutting is producing a less quantity of iron than it has hitherto done, but still several tons remain to be taken away. On the whole, the mine looks just as well as for some months past.—P.S. There have been 533 tons of ore shipped this month, and another vessel loading with 170 tons.

TRELOWETH.—T. Richards: The lode in the 144, east of the sump-winze, is worth 12*l.* per fm. for copper ore. The lode in the stope in back of the 144, east of sump-winze, is worth 20*l.* per fm. The lode in the 134, east of sump-winze, is worth 8*l.* per fm. The lode in the stope in back of the 134 is worth 14*l.* per fm. The lode in the 124, west of the engine-shaft, is without change. The lode in the 124, east of sump-winze, is worth 5*l.* per fm. The lode in the 110, east of the engine-shaft, contains stones of copper ore. The other places are without change.

TRELYON CONSOLS.—R. James, E. Pooley, Oct. 20: We cannot report any alteration in the various points of operation during the week. The branch in bottom of the 20 continues worth 20*l.* per fm. for tin.

TRENCROM.—H. Woolcock, Wm. Arthur, Oct. 20: There is no change in the 110, east of Hollow's shaft, since last report. The lode in the 100, east of Hollow's, is 1 foot wide, worth 3*l.* 10s. per fathom. The north lode in the 100, east of Giesler's engine-shaft, is 1 ft. wide, worth 2*l.* per fathom. The lode in the winze sinking below the 100, east of Hollow's, is 15 inches wide, worth 4*l.* per fathom. The lode in the 90, west of Giesler's engine-shaft, is 15 inches wide, worth 3*l.* per fathom. The lode in the 90, east of Hollow's, is 2 feet wide, worth 5*l.* per fm. The lode in the 80, east of Hollow's, is 12 inches wide, saving work for tin. The lode in the 70, east of Hollow's, is 14 inches wide, saving work for tin. The lode in the 60, east of Hollow's, is 18 in. wide, worth 5*l.* per fathom. The lode in the 60, east of flat-rod shaft, is 1 ft. wide, worth 6*l.* per fm. The lode in the 50, east of Hollow's, is 15 inches wide, worth 5*l.* per fm. The lode in the 40, east of Hollow's, is 18 inches wide, worth 3*l.* per fathom. The lode at Dawe's shaft, sinking below the adit level, is 2 ft. wide, yielding a little tin.

TREREW WHEAL ROSE.—J. Middleton, Wm. Billing, Oct. 20: We have nothing new to report of within the last week's sinking beyond the fact that as we deepen there appears to be more congeniality of ground, which is good.

TREVENEN AND TREMENHEERE.—J. Medlen, W. Tippett, C. George, Oct. 19: The lode in the new sump-shaft, sinking below the 150, is worth 18*l.* per fathom. The 150 end, going west of this shaft, is worth 3*l.* per fathom. No. 1 stope, in the back, is worth 7*l.* per fathom; No. 2 stope is worth 5*l.* per fathom; No. 3 is worth 6*l.* per fm. The 150 end, going east of new sump, is worth 8*l.* per fathom. The 162, east of Trevenen engine-shaft, is worth 8*l.* per fathom; this level going west is worth 6*l.* per fm. No. 1 stope, in the back, is worth 10*l.* per fathom; No. 2 is worth 6*l.* per fathom. The stope in the 140, east of old sump, is worth 4*l.* per fathom. There is no change in the tribute department to call for remark since the last report.

VALE OF TOWY.—A. Waters, J. Harvey, Oct. 18: There is no change of note in the 124 fm. level, north of Clay's shaft, since our last report; the lode then 4 feet wide, is 5 feet wide, and opening tribute ground. The 124, south of the above shaft, is getting into a wide lode, which is slightly charged with blende, but not to value; ground hard. Curtis's rise, above the 110 fm. level, north of Field's, is improving for blende, 110 fm. level, south of the said rise, have commenced to sink below the 100 to communicate with the rise. The lode in Field's shaft, below the 110 fm. level, is 6 ft. wide; the yield of ore is the same as for some time past. The 110 fm. level, south of the shaft, is forth to a layer of ground, where the lode is of little value; this falling off in the yield is only temperary.—Tribute: Stickland's pitch, in the 124 fm. level, south of the great cross-course, is worth 2 tons of blende per fathom. Jones's pitch, in the 110 fm. level, north of Field's, is worth 3 tons of blende per fathom. Williams's pitch, in the same level, south of the shaft, is worth 4 tons per fathom. Williams's pitch, in the 100 fm. level, south of Williams's, is worth 2 tons per fathom. Harding's pitch, in the back of the 100, south of Wenallt's, is worth 3 tons of blende per fathom. Burns's pitch, in the 75 east the lode is about 2 ft. wide, producing stones of ore.

WEST GREAT WORK.—S. J. Reed, Oct. 19: The sumpmen at Paull's engine-shaft have sunk 2 fms. 3 ft. under the 16, and are now engaged putting in bearers, &c., preparatory to the fixing of a drawing-lift in this level. The cross-cuts north and south in the 16 are being vigorously pushed forward, and hope to intersect Nos. 2 and 3 lodes in the 8, east from cross-cut, has been driven through a good lode for several fathoms in the end; driving at 55s. per fm. In the adit this run of tin ground was only 3 fathoms long, which shows a greatly increased length for the depth already reached. On this lode west we continue to open tribute ground; driving at 35s. per fathom. No. 3 lode, driving east from cross-cut, has again improved, and shows indications of still further productiveness, as we continue to discover droppers of tin falling in with the lode; the end is worth 7*l.* per fm. In driving west from cross-cut the lode has been disordered for the last 3 fms.; it now produces good sawing work for tin. In the cross-cut south from new shaft, in the adit, no lode has been seen; the granite has been superseded by killas, and, from other indications, I think a lode to be near. No. 2 lode, driving west from the cross-cut in this level, produces low-quality tinstuff. As each succeeding level is reached I am glad to say the indications are becoming more favourable, together with a certainty of immediate increased returns. Our tributers, 16 in number, continue to break some rich quality tinstuff.

WEST SHARP TOR.—W. Richards, Oct. 17: During the past month the adit level has been extended 11 feet west, and the No. 4 cross-cut driven north 12 feet; the lode has been proved to be 9 ft. wide here, containing capel, quartz, peach, and oxide of iron; the ground north of the lode is soft granite; this end is now being driven west on the south side of the lode, in soft killas, at 2*l.* per fm.; stented the month. The lode in the No. 6 cross-cut, in the 162, east of Morris's shaft, continues very hard, being composed of capel, quartz, peach, mundic, and a little yellow copper ore. The part of the lode cut through during the past week in the 162, east of No. 4 cross-cut, is improved a little; containing gossan, iron, capel, quartz, and rich grey copper ore; worth 13*l.* per fathom. The 162, west of the No. 4 cross-cut, continues very spare for progress, but it yields some splendid grey copper ore, and assumes a kindly appearance, the whole of the stuff being saved for the floors. We have not yet reached the main part of the lode in the No. 5 cross-cut in the 162 west, but expect to do so during the next three weeks; we have already passed through some kindly ground, and in the present end it is promising, the price for the current month being 10*l.* per fm.

WEST VOWNAG.—F. Evans, Oct. 18: The ore in the level driving west looks well, and will yield ore fast. The stopes above have a lode of lead 10 inches wide, so that, on the whole, the mine wears an improving aspect, and the men are working well. The 25 tons sold last week realised 344*l.* 7s. 6d.

WEST WHEAL JANE.—J. Cock, Oct. 15: Painter's engine-shaft is sunk to the 40, at which level we have set to drive east and west of shaft, by four men in each end, on a large lode, producing a little tin. The lode in the 30, east of shaft, has a little improved in appearance, but not producing tin sufficient to value. The winze sinking below the 30, east of shaft, is worth 15*l.* per fm. In the 20, west of shaft, the lode is 6 ft. wide, and worth 12*l.* per fm. The stopes are producing their usual quantity of tinstuff. We sold last Saturday, Oct. 8, about 47*l.* worth of tin in the stone. Our pay and setting went off very satisfactorily.

WEST WHEAL MARTHA.—Henry Rickard, Oct. 20: During the past fortnight we have been sinking a trial winze in the bottom of the north adit level, to prove the character of the lode, and I am glad to say the component parts of the lode is all that can be desired at such shallow depths, being only about 7 fathoms from surface. The lode in the bottom of the winze is about 3 feet wide, and vughy. The water is rather quick for sinking, so I do not expect we shall be able to get down far on that account, but a prettier lode I never saw—one that augurs well for a valuable lode in depth.

WEST WHEAL TOLGUS.—Oct. 19: Since the account meeting Taylor's sumpmen have been engaged in putting down a new lift and taking up the old one, this is now completed; before we put down the new lift we could not fork the water, consequently nothing has been done in the 75 east or west, nor in the shaft, since the account meeting before to-day. I hope next week to be able to give you a full report of the 75. In of ore per fathom—a fine-looking lode. We have this day set a rise to four men over the back of the 65 west, just behind the 65 fm. level end, where the lode will produce 4 tons of ore per fathom. The stope over the back of the 65, east of Taylor's engine-shaft, is yielding 2 tons of ore per fathom, and the stope over the back of the 59 is producing 2 tons of ore per fathom.—North Lode: In the 65, east of Taylor's engine-shaft, and east of the cross-cut, the lode is 2 feet wide, producing good stones of ore—a very promising lode. The two stopes over the back of the 65, east and west of the rise, are each producing 3 tons of ore per fathom.

WEST WHEAL TREVELYAN.—J. Harris, October 15: The lode in the 68, east of Charles's shaft, is 4 ft. wide, of quartz, &c. In the 68, west of cross-course, we have met with more lode to our south, which appears to be the main part; we have cut into it about 4 ft., and met with no south wall; and so far as seen 2 ft. of the north side is composed of capels, &c., south of which for 15 inches wide is a branch of beautiful white quartz; inside of this we have cut into about 10 in. in a beautiful looking stuff, composed of quarts, peach, and prian, with black and grey ore; and, judging from the little we have seen of this part, I think we shall meet with something good; it is letting out a great quantity of water.

WEST WHEAL VOR.—J. Southey, Oct. 19: The fixing of the pitwork and the erection of the 50-in. cylinder-engine is almost finished, and we hope to put the engine to work on Saturday next, after which the sinking of the shaft and the driving of the adit cross-cut north will be resumed with all possible speed.

WHEAL AGAR.—W. Roberts, Oct. 19: The lode in the 100, east of Windstow shaft, is 1½ ft. wide, chiefly flookan and spar. In the 60, west of cross-cut, the lode is 3 feet wide, producing stones of ore.—Western Shaft: In the 100 east the lode is 1½ ft. wide, composed of mundic, peach, spar, and stones of ore.—North Lode: In the winze sinking below the 70 the lode is 3 ft. wide, producing 1 ton of ore per fm. In other parts there is no improvement to notice since last reported.

WHEAL CARADON.—F. Fryor, Jas. Browne, Oct. 15: We are still forcing on the various points of operation, but the lodes are without much alteration since our report sent you for the meeting. In the 70, east of Cruttwell's engine-shaft, we have recently cut an increase of water, which has partially drained the 60; this end hitherto has been slow in consequence of the water, but in future we hope the progress will be more rapid. In the 30, west of trial shaft, on Mary's lode, we do not hesitate to again repeat that a more promising lode cannot be seen at such a shallow depth. The trial shaft is down a little over 4 fms. We shall now engage the men the coming month to fix a plunger-lift, &c., and when completed the sinking of the shaft will be resumed, and not again impeded until it reaches the 40, when a cross-cut will have to be driven a short distance to intersect the lode, and our expectations are of seeing a decided improvement.

WHEAL CREBOR.—J. Gifford, Oct. 18: At Cock's shaft the lode still maintains its size and character, being fully 6 ft. wide, yielding good stones of copper ore—a very promising point, where I am daily expecting a great improvement. In the 90 east the lode is 3½ ft. wide, composed of capel, quartz, mundic, and copper ore, yielding of the latter 2½ tons per fm.; we have 6 ft. more of the lode desued, which we shall take down in the latter part of the week, where, from present appearances, I think it will prove much better. In the 96 west the lode is 7 ft. wide, yielding 5 tons of copper ore per fathom; we have taken the lode down 4 fms. long from the cross-cut, and 8 ft. high, which has yielded above 30 tons of copper ore, worth at the present standard 180*l.*; and for the whole length in the bottom of the level it will yield 7 tons, worth 45*l.* 10s. per fathom. In the 84 and 72 fm. levels east we shall begin to take down the lode to-morrow, where, from present appearances, I think it will look well. In the stope in bottom of the 84 east the lode is 6 ft. wide, yielding 6 tons of copper ore per fm. No alteration in the tribute pitches to notice. We intend to set two other pitches on Saturday next, one in the back of the 34, east of Onta's rise, and the other in back of the 96 east, between Cock's shaft and Hosking's winze. We are getting on well with our sampling, and shall have the promised quantity (120 tons) ready in good time.

WHEAL EDWARD.—G. Rowe, Oct. 15: The lode in the different stopes, in bottom of the 81, are producing moderate quality ore to the amount of 2, 3, and 4 tons per fm. The lode in the 61 west has not been taken down since last reported on.

WHEAL EMILY HENRIETTA.—John Daw, Oct. 19: The lode in the flat-rod shaft is in three parts, each producing good stones of copper ore; these parts will form a junction in about 6 ft. further sinking. The lode in the 68, west of flat-rod shaft, is 2½ ft. wide, composed of mundic, soft spar, and good stones of ore, and is promising for improvement. In the 56 west the lode is 2 ft. wide, composed of spar, peach, and mundic.

WHEAL ESTHER.—Oct. 20: An important discovery has taken place at the western part of this mine. A lode has been cut, full 5 ft. wide, and is producing quite ⅛ cwt. of tin to the ton of stuff. I would strongly recommend a level to be driven east on the course of this lode; by so doing a profitable mine will be laid open. A level can be driven on the course of this lode for upwards of one mile, so that this discovery appears to be a permanent one.

WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Oct. 15: There is no change in the 120 west, the man having been engaged putting in a rail-road at the 110. The lode in the 110 east is 20 in. wide, yielding tinny work, and improving. The lode in the 110 west is from 2 to 2½ ft. wide, and worth 15*l.* per fm.; the tin appears to be coming over the end, and which we think to be the same shoot we had in the winze. The stope in the back is worth 20*l.* per fm. At the 100 east the men are engaged stripping down the north side; they are not yet through the lode, but so far as seen it is worth 8*l.* per fathom. The stope east of shaft is worth 12*l.* per fathom; and the two stopes west are worth 25*l.* and 10*l.* per fm. The 90 east is worth 10*l.* per fm. The two stopes above this level are worth 15*l.* per fm. each. The lode in the 90 west is split into two parts, each producing a little tin, and from the nature of the ground, &c., we are expecting an improvement. The stope above this level is worth 25*l.* per fm. The lode in the 80 east is disordered by a cross branch, but which appears to be forming itself again. The lode in the rise above the 80, west of shaft, is from 2 to 3 ft. wide, and worth 12*l.* per fm. The stope above the 80 is worth 26*l.* per fathom. We are getting on as fast as possible with the new shaft.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Oct. 20: The tin we had in sinking the winze from the 100 to the 110 appears to be dipping west over this end, and hence we are expecting a still greater improvement.

WHEAL GRYLLS.—E. Rogers, J. Pope, Oct. 20: Fisher's Lode: In the 40, driving east of Annie's engine-shaft, there has been no lode taken down since last reported on. In the stopes in back of this level the lode is worth 4*l.* per fm. In the 30 end, east of Grylls whim-shaft, the lode is worth 10*l.* per fm.; in the rise in back of this level the lode is worth 9*l.* per fm. In the 10, west of Jones's shaft, the lode is 1 foot wide, producing stones of tin, but not sufficient to value.—Standard Lode: The western shaft is down 6 fms. below the deep adit, the lode is worth 4*l.* per fm. In the 12 fm. level from surface, and driving east of Badger's shaft, the lode is 18 in. wide, worth 2*l.* per fm.

WHEAL HARRIETT.—S. Williams, Oct. 15: In the 115 north cross-cut we have cut the lode, which is 1 ft. wide, composed principally of spar, with very good stones of copper ore, but not sufficient to value. The water is abated, the engine now working six strokes per minute. The lode in the 130 east end is poor. The north lode, in the 115 west end, is 1 ft. wide, producing stones of copper ore. The north part of the main lode, in the 115 west end, is 1½ ft. wide, of a kindly appearance.

WHEAL HOPE.—W. H. Reynolds, Oct. 18: The lode in the 85 east is larger, worth 7*l.* per fm. for lead; in this level west the lode is worth 3*l.* per fathom. The 75 cross-cut west is driven about 3½ fathoms, and we expect to cut the main lode in it shortly. In the 28 west, on south lode, we have some stones of lead, and the lode looks promising.

WHEAL KITTY (St. Agnes).—S. Davey, Wm. Polkinghorne, Oct. 15: We have no change worthy of notice in the 82, west of this shaft, or in the 54 cross-cut, driving north, since our last report.—New Shaft, Pryor's Lode: In the 65, driving east of shaft, the lode is worth for tin 10*l.* per fm., with a good appearance. In the 65, west of shaft, the lode still maintains its very promising character, being 4 ft. wide, and worth for tin 22*l.* per fm. In the 54, driving east of shaft, the lode is worth for tin 10*l.* per fm. In the 54, driving west of shaft, no lode has been taken down during the present week. In the 44, driving east of shaft, the lode is worth for tin 8*l.* per fm. In the 44, driving west of shaft, the lode is showing signs of an early improvement, now 4 ft. wide, and worth for tin 12*l.* per fm. In the 34, driving east of shaft, the lode is worth for tin 6*l.* per fathom. The ground continues to present a favourable appearance in the 82 cross-cut south. The men are making fair progress in clearing and securing the 44 cross-cut south. Our tribute department is looking much as usual.

WHEAL LOVELL.—J. Phillips, Oct. 20: The engine-shaft is drained and secured to the 124, or only 10 fathoms from bottom. We are now fixing a plunger-lift at the 124, and hope to set it at work to-morrow, soon after which the mine will be drained to bottom. The 104 west is being driven at 3*l.* 10s. per fathom—lode large and very promising, and will about pay for driving. We are clearing the 114 west. We can get into the end, where there is a very fine-looking lode, 2 feet wide, with rich spots and patches of tin in it. We hope to be driving on this lode in a few days; in the stope behind the end the lode is from 3 to 4 feet wide, which will work at a high tribute. The 74 is being cleared east, at 10s. per fathom. A great many fathoms in other levels have been cleared in the present quarter, and winzes communicated from level to level, so that the ventilation is good.—Eastern Shaft: This shaft is now 6 fathoms under the 10; sinking by six men, at 3*l.* 10s. per fathom; the lode small but rich, and the ground congenial. A stope is working in bottom of adit level at 30s. per fathom. We are pleased with the rapid progress in draining the mine, and the appearances in the deep levels and in the eastern ground. The steam-stamps having had some repairs is now in good order, and has commenced working.

WHEAL MARGERY.—R. James, W. Rogers, Oct. 20: At Wellesley's engine-shaft, sinking below the 110, and also in the 70 west, the lode continues without change. At the American shaft, sinking below the 132, the lode is worth 12*l.* per fm. for length of shaft. In the 132 west the lode is improved, worth 5*l.* per fm. In the 132 east the lode is worth 10*l.* per fm. In the 122 east the lode is worth 2*l.* per fm. In the 122 west the lode is yielding stones of ore. In the 110 east the lode is worth 2*l.* per fm. In the 100 west the lode is worth 5*l.* per fm. The stopes throughout the mine are without alteration during the week.

WHEAL NORRIS.—John Andrews, Oct. 14: The sinking of Carter's shaft is progressing much as usual. The No. 4 lode, in the 45 end, driving east of Carter's shaft, is 2 feet wide, worth for tin 4*l.* per fathom. I expect a great improvement in this end shortly, as we are getting under the tin ground in the lode above. The No. 3 lode, in the 35 end, driving west of cross-cut, is small. The No. 2 lode, in the 35 end, west of cross-cut, is 18 inches wide, composed of quartz, peach, oxide of iron, &c.; this lode is improving in appearance as it leaves the influence of the cross-course. In the 35 cross-cut south we have intersected a branch or lode, but can say but little of its size or quality, as we have only to-day cut into it: I shall be able to say more about it in a few days. The lode in the stope in the back of the 35 maintains its size, but it is not so productive for tin in the western part of the stope; the lode is worth 6*l.* per fathom, in the eastern part 15*l.* per fathom. The tribute pitch is looking very well.

WHEAL SPARNON.—W. Tregay, E. Chegwin, Oct. 15: Sump: We believe we are now nearly to the old men's 40 feet level. In cutting down the shaft we can see a level with the water about 3 feet below the back; we expect to complete cutting down the shaft to this point early next week, when we shall immediately cut ground for bearers and cistern. In the 20 west end the lode is worth 1 ton of copper ore per fm. In the 20 north cross-cut nothing of importance has been intersected since last reported. We are making good progress with the surface work.

WHEAL TREMAYNE.—R. Williams, J. Williams, Oct. 19: At the new engine-shaft, sinking under the 143 fm. level, on north part of the engine lode, the lode is 10 in. wide, composed of spar, mundic, and occasional spots of tin. In the 143 west the engine lode is 1 ft. wide, chiefly composed of flookan, spar, and mundic; in the same level east the lode is still disordered, and mixed with killas. The stope in the back of the same level west is worth 3*l.* per fathom. In the 133 east the engine lode is 15 inches wide, yielding low price tinstuff. In the winze sinking under the same level Allen's branch is unproductive. In the 123 cross-cut south, east of the same shaft, towards the engine lode, the ground looks favourable for mineral. The stopes in the bottom of the same level east, on Allen's branches, are worth on an average 8*l.* per fathom. In the 113 east the engine lode is 1 ft. wide, yielding low-price tinstuff; the stopes in back and bottom of the same level east, on Allen's branches, are worth on an average 14*l.* per fathom. In the 103 east Allen's branch is yielding low-price tinstuff. The stopes in the back of the same level, on Allen's branches, are worth on an average 9*l.* per fathom. The ground in the cross-cut, south of the same level, towards Wallis's lode, is favourable for progress, and looks congenial for mineral.

WHEAL UNITY CONSOLS.—Wm. H. Reynolds, Oct. 18: The lode in the shaft is yielding some good copper ore, and the winze is now down 7½ fathoms, and still going down in good ore ground, which will work at a moderately low tribute.

WHEAL UNY.—S. Coade, M. Rogers, Oct. 15: The lode in the engine-shaft is the same in value—30*l.* per fm. for the length of shaft, 12 ft. The 110, east of engine-shaft, is worth 15*l.* per fm. The 110, west of engine-shaft, is worth 12*l.* per fm. The incline shaft, sinking below the 100, is worth 20*l.* per fm. for the length of shaft, 9 ft. The 80, east of Goodinge's shaft, has improved, and to present appearance is worth 7*l.* per fm. The 60, east of Goodinge's, is worth 7*l.* per fm.

WORVAS DOWNS.—R. Harry, Oct. 19: At Bamfield's flat-rod shaft, sinking below the 20, there is no alteration in the size

THE ECONOMIC VALUE OF MIXING DIFFERENT KINDS OF COAL.

It may be taken as pretty certain that the next great naval war will bring, for one indirect result, a great accession to our means of economising fuel in steam-boilers. In spite of Sir W. Armstrong's warnings, we do not much care, in these piping times of peace, about the amount of fuel we waste in our steam furnaces. But the case will be far different with our war steamers when engaged in actual operations, and they might just as well be without powder in their magazines as without coal in their bunkers. Every means will then be tried to diminish the consumption of fuel, and we shall then see in use a number of expedients of all kinds, beginning at the furnace, and ending with the condensed water that has passed in the form of steam through the engine. The most natural and obvious beginning is to attempt to economise by improving the fuel. It is often forgotten, in speaking of coal, what an almost innumerable variety of fossil fuel is burnt under the generic name of coal. The principal ingredients of different coals—fixed carbon appearing in the form of cake, when the volatile hydrocarbons, such as olefiant gas, tar, naphtha, &c., are driven off, and leaving different ingredients behind in the form of ash when both the free carbon and the hydrocarbon have been consumed—vary to a great extent. The relative amount of fixed carbon in different coals varies from 30 to about 90 per cent.; the different hydrocarbons from 5 to 58; and the proportion of water from a very small amount to 27 per cent.; while the proportion of ash is, in some specimens, only about 2 per cent., and in others as much as 26 per cent. Remembering what an essentially complicated phenomenon combustion is, we should not be far wrong in expecting that each different gradation in the kind of coal would require a different kind of apparatus for evolving its maximum thermal effect. Different treatment of one and the same coal must produce different values of useful heat. It is one and the same thing to say that a given form of furnace—the term being used in its widest sense—requires one certain kind of coal, stoked in a certain way. In the endlessly varying kinds of coal, in the multitudinous forms of existing coal-burning apparatus, and in the varying methods of burning coal—dependent on the skill and will of the stoker—do we see the reasons for the many anomalous statements and existing beliefs as to the qualities of different kinds of coal, as to the values of different forms of furnaces, and of different modes of stoking. A goodly proportion of the thousand and one patents that have been taken out for economising fuel are mere one-sided expedients, often good enough in their way under certain conditions, and more especially when in action under the fond parental eye of the inventor. But cast forth into the world, and tested under different circumstances, the results are far different.

The most practical question in the very wide enquiry as to economy of fuel is:—Given a certain form of furnace, what is the most suitable fuel? Or could not the best fuel, for a given purpose, be obtained from a combination of different coals? Now a combination of different kinds of coal has long been used with good effect for domestic purposes. Mr. Wicksteed's experiments, made many years ago, gave 8·045 lbs. of water evaporated per lb. of average Welsh coal; 8·524 lbs. for the best small Newcastle coal, and 7·865 lbs. for Welsh and Newcastle mixed half and half. It seems a wonder that more attention has not been given to these experiments of Mr. Wicksteed. There has been a long and very warm contest between the rival North Country and South Wales Coal Associations as to the relative values, for steaming purposes, of North Country and Welsh coal. No small stake is involved in the contest, as the fat Government contracts for provisioning the British Navy are the great prize. Some years ago the Government caused an investigation of the matter to be made by De la Beche and Playfair, and the result was a lengthy Blue Book, the conclusions contained in which, however, have been much disputed. There can be no doubt that Welsh coal does possess higher evaporative power than Newcastle coal, but from the results of some experiments instituted by the Admiralty, and recently published in a Blue Book on the motion made during the last session, by Mr. Lindsay, M.P., it appears that very great practical advantages are obtained by using a combination of Welsh and Newcastle coals for marine purposes.

The practical problem set by the Admiralty consisted in ascertaining whether North Country coal, in combination with Welsh coal, might not be used with advantage in firing marine-boilers. The three proportions tried were—One-third North Country to two-thirds Welsh; one-half North Country to one-half Welsh, and two-thirds North Country to one-third Welsh. The engineer in charge of H.M.S. *Supply*, Woolwich, reports that he found the best proportion to be one-third North Country to two-thirds Welsh, as the North Country coal kept the Welsh more open, the fire required less pricking, while the total consumption was the same as when Welsh coal alone was used. A similar result was obtained on H.M.S. *Wye*, at Ascension. Two-thirds Welsh to one-third North Country were found to burn less than either of the other proportions for the same amount of work—"producing considerably less smoke, ashes, and soot, with an increase in the percentage of clinkers." Similar experiments on H.M.S. *Fearless*, Sheerness, produced the same result, and the trials appear to have been conducted with much greater facilities for accuracy than on the two previous ships. The two different coals were also tested separately, "in order to ascertain their respective merits," and the Welsh coal (Russell's Block vein) required 5·4 lbs. per indicated horse-power per hour, North Country (Duddle's West Hartley) required 7·6 lbs. per indicated horse-power per hour. Combined together, in equal proportions, 5·9 lbs. were consumed, but only 5·6 lbs. per indicated horse-power were burnt when two-thirds of Welsh and one-third of West Hartley were employed. On the other hand, similar trials, conducted at Portsmouth, on H.M.S. *Lucifer*, would appear to give better results with Aberdare Welsh alone (trial No. 4) than with thin Ferndale Welsh alone, or half Ferndale Welsh and half Londonderry Hartley, or with one-third Ferndale and two-thirds Hartley.

The most complete trials, however, were made at the Steam Factory, Keyham, Devonport, by the chief engineer there. In the first place, five experiments were made on board the *Confiance* steam-tug, 3 tons of coal being burnt in each experiment. The exact rate of evaporation could not be ascertained, as the boiler was not provided with an apparatus for measuring the water, but the table shows that the mean pressure on the piston, the mean number of revolutions of the engines per minute, the indicated horse-power and the speed of ship, are pretty equal, so that the duration of the experiments and the total number of revolutions can be taken as the measure of the relative value of the fuels. Welsh Resolven thus gave a duration of 5 hours 5 minutes, and Hartley Main of 4 hours. When combined in equal proportions, the two coals together lasted 4 hours 48 minutes. Fifteen experiments were next made in the coal-testing boiler of Keyham Factory. This boiler is an ordinary marine boiler, but fitted with an apparatus for measuring the water fed in, and evaporating directly into the air. Four different kinds of Welsh coal evaporated, on an average, 9·34 lbs. of water per 1 lb. of coal; Hartley Main evaporated 8·26 lbs.; equal proportions of Welsh and North Country coal evaporated 8·79 lbs., while the highest result through mixing was obtained from two-thirds of Welsh to one of North Country, as the mixture evaporated 9·07 lbs. of water per 1 lb. of coal. But while these experiments were going on the Association of the South Wales Coal-owners objected to the description of coal being tried, and obtained leave from the Admiralty to send a cargo composed of a combination, in equal quantities, of Powell's Duffryn, Nixon's Navigation, and Davis's upper 4 ft. Merthyr. The North Country Coal Association, seeing this, also asked and obtained permission to send a chosen cargo—Davidson's Hartley. The Government contractor for North Country coal also sent some Harding's Hartley, and the Welsh coals, together with these North Country coals, were next submitted to a further series of 28 experiments. Single samples were taken for each description and combination, and were burnt in the coal-testing boiler in average quantities of about 12 cwts. Some of the experiments were made with the furnaces fitted with common doors, and others with furnaces fitted with perforated doors. In the first case the experiments were made with ⅛ in. space between the bars, and in the second with 5/16 in., ¼ in., and 7/16 in. spaces. The representatives of the North Country Association also requested that trials should be made on a smaller area of grate—the original area being 14 ft., which was then reduced to 10½ ft.

The first 15 experiments, made on the steam-tug *Confiance*, showed that equal quantities combined of Welsh and North Country coals could be burnt with perforated doors almost without smoke, and with an evaporative power nearly equal to that of ordinary Welsh coal. The experiments in the Keyham coal-testing boiler with the very superior Welsh coals furnished by the two Associations and by the Storekeeper General, gave as the average evaporative power of Welsh coal, 9·90 lbs. of water per 1 lb. of coal, and 165·34 lbs. per hour per foot of fire-grate; for North Country coal, 8·41 lbs. of water per 1 lb. of coal, and 153·87 lbs. per hour per foot of fire-grate; and for the combination of the two descriptions in equal proportions, 9·42 lbs. of water per 1 lb. of coal, and 153·16 lbs. per hour per foot of fire-grate. These results were produced with common doors, and when perforated doors were used the evaporative powers of the Welsh coals were slighly diminished, while those of the North Country coals alone, and those of the combination of both in equal proportions, were slightly increased. After the furnaces were shortened the evaporative powers of the Welsh coals rose to 10½ lbs. of water per 1 lb. of coal, and 229·60 lbs. per hour per foot of fire-grate. The experiments with the short fire-grate also show that it is possible to burn Welsh coal dust (which is now often thrown away) when it is mixed with North Country coal.

Doing away with smoke as much as possible on board a war steamer is not merely economically, but is also strategically, important, as the smoke from the funnel would serve as a mark to the enemy's guns, or as an index to the enemy's signalmen. The amount of the smoke formed was determined at Keyham Factory by setting down a certain number of marks for certain degrees of density and colours. Thus, very light smoke had one mark, light smoke two marks, light brown, brown, black, very black smoke, three, four, five, and six marks respectively; and these marks were recorded for every minute the smoke was seen after steking when the smoke lasted more than one minute. Briefly stated, the whole experiments show that the economic value for Welsh coal obtained from store was 9·34 lbs., with an average equivalent of smoke of 90; for best coal from the South Wales Association, 9·90 lbs.; with an average smoke equivalent of 30; for the same coal, when burnt on the short furnace, 10·13 lbs., with average smoke equivalent of 12; while the evaporative value of the North Country coal obtained from store 8·26 lbs., with an average smoke equivalent of not less than 278; and with the coal received from the North Country Association, it was 8·41 lbs., with a smoke equivalent of 292.—2. The economic value of the coal received from the South Wales Coal Association was 9·73 lbs., with an average smoke equivalent of 1¼; and with the same coal burnt in the short furnaces, 10·44 lbs., with an average equivalent for smoke of 13; while it was for the North County coal, from the North Country Coal Association, 8·61 lbs., with the average equivalent for smoke of 34; and for the same coal when burnt in the short furnaces 10·23 lbs., with the average equivalent for smoke of 25.—3. When common doors were used, the combinations in equal quantities of Welsh and North Country coal from store evaporated 8·79 lbs., with an average equivalent for smoke of 47; for the half-and-half combination of the coals received from the two Associations it was 9·42 lbs., with the equivalent of smoke of 23; and for the half-and-half combination of the Welsh small and the ordinary North Country coal burnt in the short furnaces it was 9·91 lbs. and 9·54 lbs.—4. When perforated doors were used, the combination of the Welsh and North Country coals in equal proportions gave 9·45 lbs. with an average smoke equivalent of 14½.

The important deductions from these experiments are, that a mixture of Welsh and North Country coals burn in the furnace of a marine boiler with an economy almost equal to Welsh alone, while the combination also gets up steam at a quicker rate, and with a lower average of smoke. The combination renders practicable a consumption of small Welsh coal, while less smoke is produced, and the steam-boiler is rendered more powerful through its increased powers of evaporation. Mr. Miller remarks that "there would be no difficulty in coaling a ship with the two descriptions of coal, as the bunkers on one side of her might be filled with North Country coal, and those on the other side with Welsh coal." Half the number of coal sacks in the store coal hulks might contain one kind of coal, and the other half the other kind. There can be little doubt that the example of the naval administration might be followed with advantage in many parts of the country, and that a superior fuel could oftener be obtained by a judicious mixture of inferior qualities.—*The Engineer.*

OLD WHEAL NEPTUNE MINING COMPANY (Limited).—The application made to the Vice-Warden, by Mr. Josiah Harris, to determine the question of his right of pre-emption to the machinery at the mine at a valuation, was heard on Thursday last, and the Vice-Warden declared that the right existed in Mr. Harris. The application on the part of the shareholders to convene a meeting was refused.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

GOLD IN WALES.—Castell Carn Dochan returned for the week ending Oct. 17, 2 ozs. 4 dwts. of Gold, from 19 cwts. of quartz.

GUNNIS LAKE AND CLITTERS ADIT has sold 15 tons of tin, and is preparing 20 tons more for market. The mine, although little known in the market, is one of the best progressive mines at work, and likely soon to be in the Dividend List. It will ultimately vie with its neighbour—Devon Great Consols—the copper raised being of first-rate quality, and generally making the best price in the market. A great number of the shares are held in Glasgow.

CARGOLL MINES sold lead to the value of 1303*l.* 19s. 6d., and expect to sample next week about 60 tons of copper ore, and about 100 tons of blende.

NORTH CHIVERTON continues to improve. The report this week refers to further discoveries. The mine is now attracting considerable attention in the district.

LADY BERTHA.—In the 30 fm. level east the great cross-course has just been cut, and contains peach, mundic, quartz, and rich yellow and black copper ore, leaving but little doubt that when the lode is cut on the other side a rich deposit of ore will be met with.

GREAT EAST LOVELL.—The proximity of this mine to that of East Lovell renders it just now an object worthy of especial attention. It will be remembered that at the commencement of this mine Capt. Charles Thomas, and other agents, reported most encouragingly upon it. Like other mines, however, the shares have not been so actively dealt in as its merits deserve.

EAST WHEAL ABRAHAM.—Capts. Henry James, the manager (Oct. 19), reports:—I was down at East Abraham yesterday, and find they are getting on very nicely with fixing the ladders. I hope to be able to go down and see the lodes in the adit level next week—that is, if the adit is clear, and letting down the water all right, which I hope to find is the case.

EAST WHEAL LOVELL.—Reference was made in last week's Journal to the rapidity with which the shaft was being completed. When this important and necessary work is finished the returns of tin will be considerably increased, as operations will be carried on both on the north and south lodes, in addition to which cross-cuts are being put out to cut the side lodes, where, from indications, further important discoveries will shortly be made.

EAST WHEAL VOR.—As the development of this mine progresses the favourable opinions which have always been entertained with regard to it receive additional confirmation. The cross-cut in the 60, to intersect Smith's lode, is in an easy and improving channel of ground, and the lode, it is expected, will be cut in about a month hence. This lode in the 30 yielded large and valuable returns; therefore the cutting of it in the 60 is a point of considerable importance. The lode in the shaft sinking below the 70 is opening out satisfactorily, and a rich deposit of tin may be expected shortly. As regards the financial position of the company, it may be stated that there are between 4000*l.* and 5000*l.* in hand, which is sufficient to carry on the operations for the next 12 or 18 months. The works in progress are upon the rich old Wheal Vor lode, which gave such enormous profits. The now celebrated Metal lode in Great Wheal Vor is being developed in East Wheal Vor, and it is to be hoped that the same success will be realised.

HINGSTON DOWN MINE has much improved at the bottom levels, and still further improvements are probable. At the next meeting there will be so good a credit balance in hand that it is expected that a dividend may be declared, and still a fair balance carried forward.

CARN CAMBORNE—SOUTH CONDURROW.—A short time since I noticed a letter in the Journal respecting the former mine, saying that the floors must be enlarged. I have this day (Wednesday) been on the mine, and find the suggestion is being carried out. I also find the stones are being brought on the mine to build the house for the crusher, which I was informed is bought; this is a move in the right direction, and I fully expect if the floors are not found to be too small at the next sampling, they will be before there are many more samplings, for a more promising mine at the depth Cornwall cannot produce. As a rule, the limiting of inspections to one day a month is objectionable, setting aside the legality. In this instance the committee, no doubt, have done right to bring the matter before the adventurers, and get a resolution passed prohibiting the inspection except on the first Wednesday in every month, seeing that there have been issued so many damaging reports lately.—SOUTH CONDURROW is another mine in the same district, a little to the north of the Grenvilles, that is opening out well. The committee acted properly by removing the engine further west. They have broken and sampled within three weeks 20 tons of ore, which it is expected will realise from 12*l.* to 15*l.* per ton, besides selling about 300*l.* worth of tin, and having fully 5 tons more tin broken, that cannot be stamped for the want of water. The 10 east is looking well, a splendid lode of tin; also the 20 east, where there is a lode worth 20*l.* per fathom for tin. These ends are being driven at 10s. per fathom. They have resumed sinking the sump shaft below the 50, and have a lode of tin worth 30*l.* per fathom. Some rocks were brought to surface on Wednesday, weighing 1 cwt. per stone, which are a quarter part tin. This mine will in a few months be a great rival to its rich neighbour, Wheal Grenville. The manager says he thinks the mine will now pay its way, and that no further calls will be required; certainly not if the present prospects continue.

THE TIN TRADE.—We are favoured by Mr. L. Th. Van Houten, of Rotterdam, with the official return by the Dutch Board of Trade of the import and export of tin from Holland during August, and the eight months ending Aug.:—

IMPORT.	Aug. 1864.	Aug. 1863.	Eight months. 1864.	Eight months. 1863.	Twelve months. 1863.	Twelve months. 1862.
From Java ..... Tons	367	Not given	3665	Not given	3458	5111
„ England	32		179		220	184
„ Other countries	—	separately	5	separately	22	7
Total tons	399	353	3849	2171	3700	5302

EXPORT.	Aug. 1864.	Aug. 1863.	Eight months. 1864.	Eight months. 1863.	Twelve months. 1863.	Twelve months. 1862.
To Germany ..... Tons	283	Not given	1226	Not given	1475	1825
„ England	685		965		649	1126
„ France	242		762		755	1116
„ America	—		21		34	299
„ Belgium	65	separately	347	separately	246	235
„ Hamburg	29		122		147	254
„ Other countries	54		132		368	255
Total tons	1358	548	3575	2429	3674	5110

THE COPPER TRADE.—Mr. J. Pitcairn-Campbell, of Liverpool, reports—Under the continued heavy money pressure there is an increased desire to sell both on the part of smelters and importers, and the latter having freely met buyers, a fair business has been concluded in bars for export. English copper is offered at 5*l.* under printed quotations. Sales in the fortnight have been—

Oct. 3—112 tons bars, to arrive per "Uncas,"	£84	10	0	per ton.
„ 6—560 „ „ "Vencedors," (deliv. at Havre)	84	10	0	„
„ 7—168 „ „ "Uncas"	84	0	0	„
„ 7— 50 „ „ "Santa Rosa"	84	0	0	„
„ 7— 53 „ on spot, in second hands	83	10	0	„
„ 8— 50 „ to arrive, per "Mindanas,"	83	10	0	„
„ 8— 50 „ „ "Nauphante,"	83	10	0	„
„ 10— 50 „ on spot, in second hands	83	10	0	„
„ 11—440 tons Canadian ore, by tender	0	17	4½	p. unit
„ 13— 50 tons bars, in second hands	83	0	0	per ton.

Quotations are 83*l.* and 83*l.* 10s. for bars, 17s. 3d. and 17s. 6d. for ore and regulus, 17s. 9d. and 18s. for Barilla. The arrivals omitted in my last, and reported since, are—

	Ore.	Regulus.	Bars.
"Bucephalus," Coquimbo	190	—	45
"Aipaca," Valparaiso	—	—	201
"Frankby," Valparaiso	—	—	284
"Llama," Lota	—	—	173
"Santa Rosa," Totoralillio	—	—	227
"Enterprise," Valparaiso	—	—	224

Stocks in first and second hands likely to be available, as far as they can be estimated, are—

Ores.	Regulus.	Bars.	Barilla.
1068	852	3652	120

In Swansea they are—

Ores.	Regulus.	Bars.	Barilla.	Ingots.
3765	1151	1473	—	225

Imports into Liverpool and Swansea in ores, regulus, bars, &c., during the three months ending Sept. 30, have been equal to 10,704 tons pure copper, making for the nine months 32,780 tons against 24,095 tons during the same period in 1863. Tin continues very flat, and the nearest quotation for Straits is 97*l.* per ton.

THE MINERAL WEALTH OF TURKEY.—Returning once more to this subject, we may note that the production of Trebizonde copper in 1853 was 1300 tons, but it had fallen in 1856 to 290 tons, while in 1857 it was only 193 tons. M. Heuschling states—without, however, indicating the source of his information—that the trade of Constantinople now estimates the production of the Eleou copper mines, near Trebizonde, at 350,000 okas, and that of the Tokat mines at 300,000 okas, per annum. The copper from these last mines is divided, according to the same author, into red Tokat, brown rosy Tokat, and grey Tokat, which sold at Rouen, in 1852, at 82*l.*, 77*l.*, and 72*l.* per ton, including an import duty of 1*l.* per ton. M. Heuschling adds that the exportation of copper from Trebizonde to Europe only dates from 1850. As to the mines of lead which Asia Minor possesses, M. de Schibatcheff estimates the annual production at 175¼ tons. These details do not embrace the whole metallic production of all Asiatic Turkey. Thus, the existence is mentioned in the Pashalic of Adana first of a lead mine situated near Koulik-Bogas, the annual production of which is given at 300 to 400 tons, and which might, it is said, be decupled; and, secondly, of an iron mine situated in the mountains of Rosan-Kah (in the Taurus chain), which is worked open to the sky, and produces annually from 40 to 50 tons. Turkey in Asia lacks iron, that metal being furnished to it by England, Sweden, and Russia. Fifteen or twenty years since foreign iron sold in Syria at 12*l.* to 16*l.* per ton. The iron imported into the Pashalic of Erzeroum proceeds from Russia under the form of bars; it arrives from Odessa or Taganrog by Turkish boats, which bring it to Trebizonde. The annual importation of Russian iron into the Pashalic of Erzeroum amounted, ten years since, to 220 tons, of a value of 4800*l.* In 1857, there were imported at Trebizonde 583 tons of iron, steel, files, and tin, representing a value of 27,289*l.* During the same year there were imported from England, France, and Austria at Smyrna, rough and worked iron and steel of the value of 105,520*l.* From France there were imported into Turkey in the decennial period from 1851 to 1860, 4000 tons of iron, 4400 tons of lead, and 400 tons of zinc.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, Oct. 21, 1864.

COPPER.	£	s.	d.	£	s.	d.
Best selected ..... p. ton	88	0	0	89	0	0
Tough cake ..... „	85	0	0	86	0	0
Tile ..... „	85	0	0	86	0	0
Burra Burra ..... „	91	0	0	92	0	0
Copper wire ..... p. lb.	0	1	1	—	—	
ditto tubes ..... „	0	1	1½	—	—	
Sheathing & bolts p. ton	98	0	0	99	0	0
Bottoms ..... „	112	0	0	—	—	
Old (Exchange) ..... „	91	0	0	—	—	

IRON.	Per Ton.					
Bars Welsh, in London	7	17	6	—		
Ditto, to arrive	7	15	0	7	17	6
Nail rods	8	15	0	—		
„ Stafford. in London	9	10	0	—		
Bars ditto	9	10	0	—		
Hoops ditto	10	0	0	11	0	0
Sheets, single	11	0	0	11	10	0
Pig No. 1, in Wales	4	10	0	—		
Refined metal, ditto	4	0	0	5	0	0
Bars, common, ditto	7	0	0	—		
Do., merch., Tyne or Tees	8	5	0	8	10	0
Ditto, railway, in Wales	7	0	0	7	10	0
Ditto Swed. in London	12	0	0	12	5	0
To arrive	12	5	0	—		
Pig, No. 1, in Clyde	2	11	3	2	18	0
Ditto, f.o.b. Tyne or Tees	2	16	0	2	18	0
Ditto, forge, f.o.b. ditto	2	15	0	—		
Railway chairs	5	10	0	5	15	0
„ spikes	11	0	0	12	0	0

LEAD.						
English Pig, ordny. soft	20	5	0	21	10	0
Ditto (WB)	22	10	0	—		
Ditto sheet	21	15	0	—		
Ditto red lead	22	0	0	—		
Ditto white	26	0	0	26	5	0
Ditto patent shot	23	0	0	—		
Spanish	19	10	0	—		

BRASS.	Per lb.
Sheets	9½d.–10d.
Wire	9½d.–10d.
Tubes	9½d.–9¾d.
	9½–10d.

FOREIGN STEEL.	Per Ton.					
Swedish, in kegs (rolled)	15	10	0	15	15	0
„ (hammered)	16	0	0	16	0	0
Ditto in faggots	17	0	0	18	0	0
English, Spring	19	0	0	22	0	0
Bessemer's, Engineers Tool	44	0	0	—		
„ Spindle	30	0	0	—		
QUICKSILVER (per bottle)	8	0	0	nom.		

SPELTER.	Per Ton.					
Foreign	21	15	0	—		
To arrive	22	0	0	—		

ZINC.						
In sheets	28	0	0	—		

TIN.						
English, blocks	101	0	0	—		
Ditto, Bars (in barrels)	102	0	0	—		
Ditto, Refined	106	0	0	—		
Banca	97	0	0	98	0	0
Straits	96	0	0	—		

TIN-PLATES.*						
IC Charcoal, 1st qua. p. bx.	1	8	0	1	11	0
IX Ditto 1st quality „	1	14	0	1	17	0
IC Ditto 2d quality „	1	6	0	1	8	0
IX Ditto 2d quality „	1	12	0	1	14	0
IC Coke „	1	3	0	1	5	0
IX Ditto „	1	9	0	1	11	0
Canada plates ..... p. ton	13	10	0	—		

In London; 20s. less at the works.

Yellow Metal Sheathing, p. lb.	8½d.	–	
Sheets ..... p. lb.	8½d.	–	
Indian Charcoal Pigs in London	7	0	0 – 7 10 0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—We are unable to record any kind of improvement in the Metal Market, and we are now almost inclined to fear that we shall not seee a much better state of things this side of Christmas. The continual failures which are taking place, and the very unsubstantial basis upon which some of the firms have been trading, which is now revealed by their suspension, are creating a general uneasiness and want of confidence, and this has a tendency to prevent business being done which otherwise might be entered into, as almost everyone seems uncertain upon whom he may depend. This state of things cannot last long without being productive of the most disastrous consequences, and while the Money Market still remains in its present state of stringency there seems little or no prospect of any improvement. No doubt, eventually, good will result from the weeding out of many firms who have been trading quite illegitimately, and a check will be given to many of those schemes which have been lately put before the public of anything but a safe character; nevertheless, the trial is very severe through which we are now passing, and all parties are anxiously looking for a favourable turn to take place in commercial affairs, and for a return to stability and prosperity.

COPPER.—No improvement has taken place in the market for this metal; on the contrary, it has become still more depressed, and prices have fallen still lower. Manufactured may be obtained at 98*l.* to 99*l.*, and unwrought at 85*l.* to 86*l.* A fall in official prices cannot be delayed much longer.

IRON.—The general result of the quarterly meetings of the South Staffordshire ironmasters seems to be that the present state of the money market has checked the demand for iron, and though there is no slackness, yet prices are scarcely so firm. At the last of the meetings it was stated that the colliers' strike was expected soon to be over. This, however, unfortunately has not been realised, as the misguided men seem still determined to persevere in the erroneous course they have adopted; and though they have now been out 15 weeks, and have brought very great privation and distress upon their families, they appear resolved not to yield, but to go on, although the hopelessness of the struggle ought to be apparent to them. Undoubtedly very evil consequences will follow the course they are adopting, of which they were quite unaware, as the long continuance of the strike has driven the large consumers of coal to seek a supply from distant districts. In Welsh, the iron trade remains nearly in the same state as last week. There is still an improved home enquiry, while the depression in the Money Market tends to check exports. The American demand has fallen off materially, and there is no immediate prospect of a revival of the trade with that country. Quotations are well maintained. Swedish iron remains inactive. The Scotch pig-iron market was rather better at the commencement of the week, prices ranging between 52s. and 51s. 9d. cash, and 52s. 6d. to 52s. 3d. one month, but soon fell to 51s. cash, and 51s. 6d. one month. Towards the close of the week, however, there was quite a panic in the market, and prices gave way to 50s. 6d. to 50s. cash, and 51s. to 50s. 6d. one month, the market closing at the worst, without any sign of improvement.

LEAD continues in very limited demand, and prices remain at 20*l.* 5s. for common English pig, 21*l.* 10s. for LB, and 22*l.* 10s. for WB.

TIN.—The market for foreign has still continued to decline, and transactions have taken place in Straits at 96*l.* cash, at which there are still sellers. The price of Banca in Holland is quoted at 59 fls. to 59½ fls., and 1500 slabs have been sold at the latter price. The tendency of the market is still downwards.

SPELTER.—Very few actual sales have taken place in this metal, but the price has continued steadily to decline, it being now offered at 21*l.* 15s. on the spot, but without finding buyers.

STEEL remains in its former condition.

TIN-PLATES are dull, and orders very scarce.

QUICKSILVER is without alteration.

BIRMINGHAM, OCT. 21.—Rylands' "Iron Trade Circular" reports:—Our strike has reached its climax in an affray with the police, the arrest of 19 rioters, and the calling out of the military. Our market continues quiet, with very little doing. Pigs, common forge, 3*l.* to 3*l.* 5s.; melters, 3*l.* 2s. 6d. to 3*l.* 7s. 6d.; mine forge, 3*l.* 7s. 6d. to 3*l.* 15s.; better class, 4*l.*; hydrates, 4*l.* 7s. 6d. to 4*l.* 15s.; hematites, 3*l.* 10s. to 4*l.* 5s., according to quality; North Staffordshire, best make, 3*l.* 5s.; Cleveland district, 3*l.* 4s. to 3*l.* 12s. 6d., long weight delivered. We also quote spiegeleisen 6*l.* 15s.; puddled steel, 12*l.* 10s. per ton.—Cast-steel blocks: Raw, 1*l.* 6s. per cwt.; cast hammered, 1*l.* 14s. per cwt., f.o.b. at Hull.—Manufactured iron: Marked bars, 8*l.* 10s.; hoops, 9*l.* 10s.; singles, 10*l.*; doubles, 11*l.* 10s.; lattens, 13*l.*; angles, 8*l.* 10s. to 9*l.*; gas strips, 8*l.* to 8*l.* 15s.; mail sheets, 9*l.* to 9*l.* 10s.; Welsh bars, 7*l.* to 7*l.* 15s. at the works.

COAL MARKET.—On Monday, the arrival of 51 ships gave an ample supply for the immediate requirements of the market, and a steady business was done at last day's prices. Best house coal, 21s. to 21s. 6d.; seconds, 19s. to 20s.; Hartley's, 18s. 6d. to 19s. 3d.; manufacturers', 14s. 6d. to 17s. 6d. per ton.—On Wednesday there were 24 arrivals. The market was quiet at last prices.—On Friday 28 ships arrived. The tone of the market was dull, and a slight reduction took place in the price of house coal. Hartlepool Wallsend, 21s.; East Hartlepool Wallsend, 21s.; South Hartlepool Wallsend, 20s.; Hasting's Hartley, 19s. 3d.: 6 cargoes unsold; 25 ships at sea.

CONTRACTS FOR COAL.—The Admiralty require the supply of 3500 tons of Coal—one-third North of England, and two-thirds South Wales—to be delivered at the Cape of Good Hope.——The Admiralty also require 1000 tons of South Wales and 500 tons of North of England Coal for St. Paul de Loando;—and 1000 tons of South Wales, and 500 tons of North of England Coal, for Barbadoes.

COAL IN INDIA.—The last advices inform us that the Punjaub coal has been tried in the locomotives of the Punjaub Railway, and found to answer "as well as any English." Its combustion was nearly perfect, leaving but very little clinker.

NEW YORK, OCT. 5.—The demand for domestic Coal has been extremely light, and with liberal arrivals prices are lower and quite unsettled. The consumption is falling off, and the demand for the Navy, &c., is less than at the same time last year, hence the market is unsettled. We quote from yard at $9·25 to $11 per ton. In Foreign very little has been done, and prices are unsettled. The stock of American Ingot Copper is greatly reduced, consequently we have to report a firm market, but the decline in gold materially restricts business, and we have only to report small sales of Lake and Baltimore at $47 to $47½. New sheathing and yellow metal are firm at 50 to 72c. In other descriptions there is no special change. The market for Scotch Pig-iron has been depressed and quite unsettled by the fluctuations in gold and exchange, and prices have fallen off to $58 to $60. American ditto is quite; we omit the quotation, as it would be of no index to the market. In other descriptions a very heavy feeling prevails. We

Spain—Bar at $150, for Swedes; bar at $185 to $190, for common; and $200 to $215 for refined English; and Russian sheet 29 to 32 cents per lb.

PHILADELPHIA, Oct. 8.—The Iron Market presents no new feature this week, and in the absence of sales prices of all kinds are nearly nominal, the want of orders in most branches of the trade almost entirely suspending the usual demand for Pig Metal, which is entirely unsettled, and offered at $1 to $2 per ton lower, without finding buyers, except in small lots for immediate wants. The same may be said of Manufactured Iron. At Pittsburg buyers and sellers are wide apart in their views, hence we are without our usual sales, but one thing is certain, one or the other must give way before sales to any extent can be made, and in the absence of sales it would be impossible for us to give reliable quotations, and, therefore, we omit all speculations on the subject. The Copper market is quiet, and, like Iron, meets with a limited enquiry within the range of quotations. The stock on sale is not large, but the demand is limited at the present asking rates. The Coal trade continues at a complete standstill, and stocks are accumulating at Richmond and other points to such an extent that the miners, in the absence of orders, are stopping their operations, and prices are altogether nominal.—*United States Railroad and Mining Register.*

Business in the MINING SHARE MARKET continues dull and inactive. There is very little doing even in dividend mines, while in calling mines, however good their prospects, sales are difficult to effect in all, and impossible in some. Nor can we expect a change until monetary and commercial affairs generally wear a better aspect. One favourable feature this week is that the standard for ore is up 15s. per ton. Clifford Amalgamated, 30 to 31, ex div.; at the meeting, on Wednesday, the accounts showed a profit on two months' working of 1486*l.* 1s. 6d., and a dividend of 10s. per share (1450*l.*) was declared, leaving 112*l.* 2s. 9d. in hand. The engine-shaft in Wheal Clifford part is down 9 fathoms under the 212, and worth 14 tons of ore per fm.; the ends in this part are worth 15 tons per fm.; the stopes, 134 tons per fm.; the winze under the 200, 13 tons per fm.; in the United Mines, in Buzza's north lode, the 40 west is producing 10 tons of ore per fm. Altogether the prospects of these extensive mines generally are described as much better than they have ever been since the amalgamation. East Grenville, 7¼ to 7¾. Wheal Grenville, 5⅝ to 6½; the lode in the 110 west is worth 15*l.* per fathom; the two appear to be coming over the end, and the agents expect they are getting into the shoot of ore through which the winze passed from the 100 worth 50*l.* to 60*l.* per fathom. Carn Camborne, 32s. to 34s.; Cook's Kitchen, 12 to 13; East Basset, 56 to 58. Wheal Crebor shares keep pretty firm, at 40s. to 42s. 6d.; the lode in the shaft maintains its size and character; in the 96 west the lode is 7 feet wide, yielding 5 tons of ore per fathom; 4 fathoms of the lode taken down from this cross-cut, 8 feet high, has yielded 30 tons of ore, worth 180*l.*; and for the whole length of the bottom of the level it is worth 45*l.* per fm. East Carn Brea, 6¾ to 7. East Lovell shares have had a good rise, and leave off 11½ to 12. East Caradon shares have had a fall of 5*l.* per share, or 30,000*l.*, without any change that we can learn in the mine; but it was circulated early in the week that the ores sampled would not realise much more than 2000*l.*, and shares were put down upon it; they leave off 23½ to 24¼. From the report presented to the meeting, Williams's shaft is down to the 90, and as it is thought the caunter lode is dipping towards it, it may be cut sooner in this level than expected. The 80 cross-cut, towards the south lode, has been driven 14½ fathoms, and is expected to meet the lode in about 2 fathoms further. Seccombe's shaft is down 49 fathoms, and when sunk 7 fathoms deeper the lode will be cut into. East Russell shares also firmer, at 4½ to 5; Grambler and St. Aubyn, 7 to 8; Great Laxey, 15 to 16; Great Wheal Vor shares have advanced to 30½, 31½, and largely dealt in; Great Wheal Fortune, 7 to 8; Hingston Down shares in fair request, at 4½ to 4⅝; Kelly Bray, 10s. to 12s.; Marke Valley, 4 to 4¼; North Basset, 30s. to 35s.; North Roskear, 18 to 20; North Treskerby, 2¾ to 3; Wentworth, 7 to 8; Providence Mines, 36 to 38; South Condurrow, 27s. 6d. to 30s.; Tincroft, 15 to 16; West Caradon, 6 to 7; West Chiverton, 55 to 60; West Seton, 210 to 220; West Tolgus, 58 to 60; Wheal Basset, 90 to 92½; Wheal Buller, 10 to 12; Wheal Chiverton, 5½ to 6; Wheal Margaret, 8 to 9. Wheal Mary Ann, 16 to 17; the mine is said to have improved in the bottom levels. Wheal Seton, 200 to 205; Wheal Trelawny, 19 to 20; South Darren shares have advanced to 30s., 35s.; Prince of Wales, 3s. 6d. to 4s. 6d.

On the Stock Exchange the general tone of the Mining Market has been firmer during the week. The following quotations were officially recorded in British Mining Shares:—Chiverton, 5⅛; East Basset, 60; East Caradon, 24; East Wheal Russell, 4⅛; Great Laxey, 15⅜; Great Wheal Vor, 29½, 29¾, 31, 30, 31; Tincroft, 15; East Lovell, 11½; Great South Tolgus, 2; North Wheal Basset, 1⅛; East Grenville, 7; Wheal Seton, 195. In Colonial Mining Shares the prices were:—Cape Copper, 8⅛, 9⅛, 8⅛, 9, 8¼; General, 22, 23; Scottish Australian, ¼; Yudanamutana, 1⅛, 1⅛, 1⅛, 1⅞. In Foreign Mining Shares the prices were:—Cobre, 27⅛; United Mexican, 4¼, 4½, 4⅛; Montes Aureos, 1¼; St. John del Rey, 35½, 35⅞, 34¼, 35.

Yudanamutana shares have been in request since the arrival of the Australian mail, and closed firm with an active demand.

The Noble Dale Mining Company in course of formation, with a capital of 10,000*l.*, in shares of 5*l.* each, has issued its prospectus. It is to be incorporated under the Companies Act, with limited liability, and the purchase-money is to be 2500*l.*, of which 1000*l.* is to be in paid-up shares of the company. The sett comprises the New Wheal Grylls sett, with the addition of about 200 fathoms on the Neptune, or western continuation of Tolvadden lode. The property has been reported upon by Capts. Charles Thomas, J. Richards, and Peter Floyd; and the directors pledge themselves so to use the money entrusted to them as to try fully every point named by the inspectors, and to call for no more money than will absolutely fairly test the points.

IRISH MINE SHARE MARKET.—The market value of Bank shares fluctuated so much that, although *bona fide* transactions in them have not been numerous, they commanded the greater part of the speculators' attension, and, therefore, other descriptions of securities, including mining shares, were comparatively neglected; but, considering the general tendency of the market to heaviness, it cannot be said that mines were dull. The price of Connorree shares advanced to 19s. 6d. and 20s. each, and they are now in firm demand, at the lower figure. Buyers of Mining Company of Ireland shares have been obliged to grant the advance demanded by holders, purchases having been effected at 28*l.* cash (7*l.* paid), being a rise of from 15s. to 20s. per share since the 1st inst. Transactions in these shares were nearly of daily occurrence, and are still much sought after. Wicklow Copper shares (2*l.* 10s. paid) also realised a considerable rise, having been done as high as 14*l.* 10s. to 14*l.* 12s. 6d. for the account, being equal to advance of 5s. to 7s. 6d. since the beginning of this month; but, the directors of this company having announced their wise intention of not recommending a higher dividend for the past than was paid in respect of the previous half-year—at the rate of 24 per cent.—some disappointment has been caused among speculators for a further rise. Carysfort shares were offered for sale at 15s., and Killaloe Slate and General Mines were also on offer. *Apropos* of the opinion advanced by our correspondents that the more enlightened class of Irishmen attach but little importance to the possible retention or abolition of the Viceroyalty, we give below short extracts from speeches made on Wednesday evening last at a dinner meeting, under the auspices of the Royal Dublin Society, in the Exhibition, at which the members of the committee, the judges (of the trial of the flax-scatching-machines), the competitors, and several influential guests were present. Taking into consideration the occasion on which these speeches were made, and the influence which the company there assembled must exercise in our country, the opinions therein expressed must be accepted as pretty conclusive proofs of what Irishmen generally think on the subject:—After proposing the usual loyal toasts, which were duly honoured, the Chairman, Mr. ANDREW H. BAGOT, in proposing the toast of "The Lord-Lieutenant and Prosperity to Ireland," said that everyone must deplore the sad circumstance which deprived them of the continued benefit which they had so long enjoyed by the presence among them as chief governor of the Earl of Carlisle. In a company of Irishmen there was no necessity to speak of that nobleman further than to say that they all lamented the fact that it was not probable they would have him amongst them again as Lord-Lieutenant. Of his successor they knew little, and it was to be hoped that when he came to Ireland he would in some degree compensate them for the loss they laboured under in being deprived of Lord Carlisle. (Hear, hear.) During the existence of the interregnum it might not be inopportune to consider whether Ireland could prosper without relying upon a Lord-Lieutenant, or any other adventitious aid—to consider, in fact, whether, if Ireland were to become prosperous, they should not rely on themselves. (Cheers.) They should consider whether by each one of them attending to his own business and that of his family, they would not do more to promote the prosperity of the country than by any other means. Although there was much to lament in the present condition of the Irish people, there was, on the other hand, some evidence of returning prosperity and improvement, and of renewed enterprise in various directions. (Hear, hear.) They had reason to rejoice at that, and they had only to hope that with such signs of renewed industry and self-reliance they would soon see a decided increase and advancement in the prosperity of the country generally. (Hear.) The Chairman concluded by proposing "The Lord-Lieutenant, and Prosperity to Ireland," and coupled with the toast the name of Sir Percy Nugent.—Sir PERCY NUGENT, in responding, said the Chairman had spoken words of wisdom when he stated that if the people of Ireland were to achieve prosperity they should rely upon their own resources, and not upon a Lord-Lieutenant, or any other individual. This country had been too long long looking for prosperity in the wrong direction. The great energy and talent with which the Irish people were endowed were the last things resorted to. They had not worked themselves up to the point that they might have, considering the natural advantages which they possessed. They had frittered away a considerable portion of the talent which belonged to them in looking after experimental matters, which could not, in any case, bring prosperity to them. Hence they were in their present prostrate condition. If they had adopted those modes of advancing prosperity which other countries had done the result would have been different.

At Truro Ticketing, on Thursday, 4659 tons of ore were sold, realising 20,653*l.* 15s. The particulars of the sale were:—Average standard, 128*l.*; average produce, 5½; average price per ton, 4*l.* 8s. 6d.; quantity of fine copper, 261 tons 9 cwts. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Per unit.	Ore copper.
Sept. 29	4506	£130 16 0	5⅝	£4 12 6	16s. 5d.	£82 1 6
„ 29	3683	123 19 0	6¼	4 18 0	15 10½	79 9 0
Oct. 5	3289	122 11 0	6¼	5 2 6	15 11½	79 17 6
„ 13	2403	119 7 0	6⅞	5 10 6	15 11	79 6 0
„ 20	4659	128 0 0	5⅝	4 8 6	15 9¼	79 0 0

Compared with last week's sale, the advance has been in the standard 15s., and in the price per ton of ore about 1s. Compared with the corresponding sale of last month, the decline has been in the standard 3*l.*, and in the price per ton of ore about 3s. 6d.

At Clifford Amalgamated Mines meeting, on Wednesday, the accounts for July and August showed a credit balance of 1562*l.* 2s. The profit on the two months working was 1486*l.* 1s. 6d. A dividend of 1450*l.* (10s. per share) was declared, and 112*l.* 2s. 9d. carried to credit of next account. Captain John Richards reported that "taking the prospects of this extensive mine generally, he considers them to be much better than they ever have been since the mines have been amalgamated." It is remarked that for the quantity of ore produced no copper mine in the county of Cornwall can compare with it; the present report is one of the best ever received from the mines, and although the expenditure is necessarily heavy, the different parts of the mine reported on are worth upwards of 200 tons per fathom, and the lords are receiving upwards of 3000*l.* a-year in dues. The engine-shaft is below the 212, and is worth 14 tons per fathom, the 212 east, on the north lode, is worth 8 tons, and on the south lode 2 tons per fathom; in other parts of the mine they have what may be termed a perfect "lane of ore," one stope in the bottom of the 200 being worth 7 tons per fathom, and three stopes in the back of the 212 fm. level 36 tons per fathom. They have also a winze below the 200, a few fathoms before the 212 end, worth 13 tons per fathom, and three stopes in the back of the 220, some distance east of the other profitable ground, worth 20 tons per fathom each—equal to 60 tons per fathom at the high producer of from 11 to 12½. At Buzza's also, in the United district, they have several productive ends, turning out 10 tons per fathom.

At the East Carn Brea Mine two-monthly meeting, on Wednesday, the accounts showed—Balance carried over from last meeting, 8*l.* 18s. 5d.; copper ores sold, 2563*l.* 4s. 10d.; advance on tribute, 110*l.*; fines, 10s.; stores sold, 19s. 1d.; balance due to treasurer, 203*l.* 16s. 5d.—2887*l.* 8s. 9d.—Costs for July and August, 2349*l.* 1s. 3d.; half-year's property and income tax, 416*l.* 17s. 6d.; advance on tribute, 100*l.*; sundries, 21*l.* 10s.=2887*l.* 8s. 9d. Assets, the proceeds of sales of copper ore not at maturity, amounting to 3169*l.* 5s. 11d., applicable to the general purposes of the adventure, were carried over to the next account.

At Wheal Polmear meeting, on Tuesday (Mr. J. P. Bennetts in the chair), the accounts for the three months ending August showed a debit balance of 619*l.* 3s. 4d. A call of 1*l.* per share was made. The banking account was removed from the Devon and Cornwall Bank to the South Cornwall Bank. Capts. F. Barratt, jun., and Wm. Rowe reported upon the various points of operation. They have pitches at work at tributes of 10s. to 13s. 4d. in 1*l.*

At Wheal Union meeting, on Thursday, a call of 4s. per share was made.

At Charlotte United Mines meeting, on Oct. 11, the accounts showed a debit balance of 2741*l.* 6s. 8d. The unpaid calls amount to 755*l.* 5s. 6d. The reports being very discouraging, it was resolved—"That the mine, machinery, and materials be offered for sale by public auction in one lot, on Tuesday, the 25th inst. That the sale be conducted by Mr. George Sealy, as auctioneer, under the direction of the committee. That in case the sale of the mine and materials in one lot be not effected, the necessary notices be given to the several lords, and that the materials be brought to the surface and sold by auction, as soon as may be, in separate lots, under the direction of the committee."

At Wheal Basset and Grylls meeting, on Oct. 10, the accounts for the three months ending July showed—Tin ore sold, 4102*l.* 19s. 11d.—Balance last audit, 93*l.* 9s. 4d.; Union Banking Company, 18*l.* 13s. 10d.; labour cost, 2884*l.* 11s. 1d.; merchants' bills, 853*l.* 6s. 8d.; lords' dues, 200*l.* 0s. 5d.: leaving credit balance, 52*l.* 18s. 7d. Capts. J. B. Wilkins and W. Harris reported that—"On the whole, our prospects are better than when you last met. Number of tutwork men, 86; tributers, 85 men and 4 boys; landers and fillers, 12; enginemen, 7; smiths, carpenters, and sawyers, 12 men and 3 boys; surface men and spallers, 16 men and 1 girl; tin dressers, 6 men, 64 boys, and 82 girls; pit and timbermen, 2=men, 226; boys, 71; girls, 83: total, 380 persons."

At the Pentre Lygan Mine meeting, on Thursday (Mr. Dunsford in the chair), the accounts showed a debit balance of 101*l.* 9s. 8d. There were arrears of call amounting to 230*l.* After some discussion upon the financial position of the company, the manager was instructed to temporarily suspend operations, and forthwith institute proceedings to recover the arrears. The most favourable opinions were entertained as to the future of the mine when more extensively developed.

At the Billins Lead Mine meeting, on Thursday (Mr. Page in the chair), the accounts showed a credit balance of 133*l.* The agents' report stated that everything in connection with the machinery and pitwork was as complete as it could possibly be made. The calculation as to the future was that they would be able to sell 15 tons per month, which will pay the working cost until such time as the 80 was opened out to assist, presuming, of course, of being able to work regularly through the winter, and the truth of there still being good ore ground, as reported, in the 70 west. He was much pleased to be able to report favourably of the lode generally. It is one of the main veins of the district, and the ground already opened shows it to be rich in the production of lead ore. It would appear that it only requires to sink the mine and open deeper levels to show excellent deposits of ore, and supply a large quantity regularly for the market.

At the Snaefell Mining Company meeting, at Douglas, Isle of Man, on Oct. 12 (Mr. G. W. Dumbell in the chair), it was stated that the property to be worked consists of a portion of the Great Laxey sett, and includes a shaft sunk by the Laxey proprietors before the present company was formed. The Snaefell Company is to consist of 30,000 shares of 1*l.* each, and the Laxey Company is to receive 10,000*l.* in fully paid shares as purchase money for the property. Amongst those present were Messrs. J. B. Melladay, R. Curwen, T. Orford, T. W. Cockrill, and W. Fisk, of Liverpool; H. B. Noble, W. Beckwith, and C. Cleator, of Douglas; J. Thompson, Tuxford, and F. Housman, of London; F. Broadbent, Leigh Hall, and R. Lomax, of Bolton; W. H. Payton, of Warwick; R. V. Ryrke, jun., of Wrexham; T. H. Lee, of Whitchurch; W. Storr and W. Walker, of Leeds; and J. Wignall, of Fleetwood.

At the Cook's Kitchen Mine meeting, on Oct. 13, the accounts showed a debit balance of 999*l.* 8s. 7d. A call of 10s. per share was made. The report of the agents stated that the 258 had been driven 8 fathoms east of the engine-shaft, and the sump-winze holed to the level 2 fms. behind the end. The lode throughout the entire length of the level, and throughout the depth of the winze (11 fathoms) is worth on an average 25*l.* per fm. Dunkin's lode is opened on at the 210 fm. level 7 fms., and lode worth on an average 7*l.* to 8*l.* per fathom—high tribute ground. They were driving the 222 fathom level cross-cut towards this lode, at 65 fathoms east of engine-shaft, just opposite the best part of the main lode, which is their ground for hope of finding tin of value on Dunkin's lode.

At Long Rake Mine meeting, on Monday (Mr. R. Hallett in the chair), the accounts showed a debit balance of 592*l.* 12s. 3d. A call of 10s. per share was made. Details in another column.

At the South Condurrow Mine meeting, yesterday, the accounts showed a debit balance of 800*l.* A call of 5s. per share was made. The agent's report appears in another column.

At the West Canada Mining Company meeting, on Thursday (Mr. W. Gladstone in the chair), it was resolved to issue 20,000 shares, of 1*l.* each, to the present shareholders *pro rata* (the present market price being about 3*l.*), at par, to pay for the freehold of the Bruce property, a portion of which has been worked by the company under a lease expiring in two years and a half, an opportunity for purchasing the freehold upon favourable terms having presented itself. Details in another column.

At the Wheal Ellen (S.A.) special general meeting, on Thursday, it was unanimously resolved that the resolution of the directors for the purpose of raising additional capital not exceeding the sum of 7500*l.* by the issue of debentures has the approval of this meeting, and is hereby confirmed. It was mentioned that every successive report received from the mine substantiated the opinions previously entertained, but that the directors thought they might possibly require a small additional capital to complete the operations. The directors had power to raise the capital without convening a special meeting of the shareholders, but they thought it would be more satisfactory in every respect to obtain the sanction of the shareholders. Mr. Squarey said, that as the directors were so largely interested, the shareholders might rest assured that not one debenture would be issued more than was absolutely necessary, and that the debentures would be offered to all the shareholders.—The Secretary, replying to a question, stated that of the additional capital previously raised 1350*l.* was unexpended, which was not considered sufficient to bring the mine into an efficient state of working. He mentioned that since the last meeting Squarey's engine-shaft had been deepened about 17 fms., and widened from the surface sufficiently to admit of the placing in of the working gear. The 47 fm. level had been driven at least 17 fms., and every part of the mine which had given way had been re-timbered.—Mr. Boord mentioned that the rich part of the mine had not yet been reached. Several specimens of ore had been taken from places about to be stoped. Upon assay, one had yielded 11¼ per cent. of lead and 7 ozs. of silver to the ton; another, 13⅛ per cent. of lead and 5 ozs. of silver; another, 11 per cent. of lead and 22 ozs. of silver; another, 18 per cent. of lead and 17 ozs. of silver; another, 6⅛ per cent. of lead and 18 ozs. of silver; and another, 17 per cent. of lead and 11 ozs. of silver.—Mr. Lloyd wished to know if the present machinery was sufficiently powerful to drain the mine?—Mr. Boord said that the machinery was fully equal to keep the mine in its present fork; but the deeper part of the mine would not be drained until they could pump from the main shaft.—Mr. Squarey said that, as the directors were by far the largest shareholders, he need hardly say they were very anxious to bring the mine into a productive state. He also mentioned that the directors did not receive any remuneration for their services.

At the Quebrada Land, Railway, and Mining Company general meeting, to be held on Oct. 31, the accounts to be presented shows a balance of assets over liabilities of 18,518*l.*

An extraordinary meeting of the Port Phillip and Colonial Gold Mining Company is called for Tuesday, to take into consideration an agreement entered into between the resident director of this company and the Clunes Mining Company, for the joint working of the mine and machinery under the management of the Port Phillip and Colonial Gold Mining Company.

CONVERTING IRON INTO STEEL.—At the Academy of Sciences, M. Caron sent in a paper on Cementation, in which, contradicting the views entertained by M. Margueritte, who supposes pure carbon to be alone sufficient to convert iron into steel, he remarks that the operation on a large scale consists in enclosing iron bars in a large box of the same metal, together with charcoal made of green wood. When the mass has got to a red heat the oxygen of the air contained in the box forms an oxide of carbon by its contact with the charcoal; on the other hand, the nitrogen of the same air forms cyanides with the alkaline metals contained in the charcoal, so that the iron to be cemented is in contact with three principal elements—carbon, oxide of carbon, and the cyanides alluded to, all of which elements are necessary to cementation.

AUSTRALIAN CAPITAL IN NORTH WALES GOLD MINES.—The advices from Victoria announce that a number of Ballarat capitalists have taken shares in one of the gold mining speculations in North Wales. Mr. Theophilus Williams, a Welshman long resident at Ballarat, and owner of the ground now worked there by the Essex Company, returned to North Wales, and by careful prospecting has found a sett of great promise. It is reported the yield of gold averages from 25 to 26 ozs. to the ton of quartz.

DEVON GREAT MARIA.—In calling attention to this property, a short time since, the favourable reports of some of the leading agents in the Devon Consols district were published, and among them those of the consulting engineer, managing agent, and dialler, of the Devon Great Consols. The shares were freely applied for, and the list closed some ten days since. It may be mentioned that the property was being developed by the leaseholder and promoter previous to and during the time the capital was in course of subscription, the policy of which step is fully evidenced by the satisfactory information communicated in the annexed report of the manager, received yesterday:—

Oct. 20.—You will remember I spoke to you when at this mine of a lode in the Orchard, which had been seen by a shode pit, and I thought of driving a short cross-cut adit to cut it. The cross-cut has been driven, and the lode cut. We are through it about 4 feet; a fine looking lode, composed of beautiful capel, mundic, quartz, and yellow and black copper ore—indeed, it is one of the finest lode I have ever seen at such a depth, about 5 fms. from surface; we shall cut through it to ascertain its size, and then drive east on its course; by so doing we shall be getting more backs, and I expect, from present appearances, some copper also. This is a very important and, in all probability, valuable discovery, inasmuch as a line of rods could be easily attached to the steam-engine, when erected on the north lode, and a shaft sunk on the course of this one cheaply and expeditiously; and it has every appearance of producing abundance of copper ore at no great depth.—JOSEPH RICHARDS,

The discovery above referred to cannot be too highly estimated, as it is upon a lode running through the centre of the property, and in a direct line with the principal lode in the Devon Great Consols.

SILVER-LEAD ORE.

Sold by tender, by Messrs. James and Shakspeare, on the 20th October.

Mines.	Tons.	Price per ton.	Purchasers.
Talisker (Australia)	40	£11 3 0	Sims, Willyams, & Co.
ditto	86	12 0 0	ditto

LEAD ORES.

Sold on the 14th October.

Mines.	Tons.	Price per ton.	Purchasers.
Cargoll	63	£18 0 6	—
ditto	19	7 14 0	—
ditto	2	7 10 6	—
ditto	1	7 1 0	—

Sold on the 20th October.

Minera Boundary, &c. (blue ore)	37½	13 5 0	J. Hughes.
ditto ditto	2½	10 5 0	ditto

WEST VOWNAG.—This mine sold last week 25 tons of Lead Ore, realising 344*l.* 7s. 6d.

BLENDE.

Sold on the 18th October.

Mine.	Tons.	Price per ton.	Purchasers.
Great Laxey	200	£3 19 6	J. Collingborn.

BLACK TIN.

Sold on the 13th October.

Mines.	Tons	c.	q.	lbs.	Price per ton.	Amount.	Purchasers.
Pendeen Consols	4	10	3	24	£55 0 0	£ 250 3 6	—Bolitho & Sons.
ditto	4	5	0	17	55 0 0	234 3 3	—Michell & Co.

Sold on the 14th October.

Gt. Wh. Vor Utd.	50	5	3	8	—	3281 2 9	—

Sold on the 19th October.

East Wh. Vor	2	18	0	5	58 0 0	—	—Harvey & Co.
ditto	0	4	0	12	43 10 0	—	— ditto

COPPER ORES.

Sold on the 18th October.

Mines.	Tons.	Price per ton.	Purchasers.
Parys Mines	140	£7 0 6	J. Keys & Son.
ditto	140	7 0 6	Mona Co.
ditto	135	3 6 6	C. Lambert.
ditto	135	3 6 6	Mona Co.

COPPER ORES.

Sampled Oct. 5, and sold at the Royal Hotel, Truro, Oct. 20.

Mines.	Tons.	Price.
Devon Great Consols	131	£5 4 0
ditto	127	4 9 6
ditto	126	4 17 0
ditto	124	4 5 0
ditto	121	3 12 6
ditto	120	5 3 6
ditto	118	4 13 6
ditto	114	4 12 0
ditto	113	4 13 6
ditto	112	6 5 6
ditto	111	5 12 6
ditto	109	4 13 6
ditto	107	4 17 6
ditto	103	5 5 6
ditto	99	1 8 0
ditto	82	3 3 0
ditto	74	4 12 0
ditto	51	13 16 6
ditto	44	9 14 6
ditto	36	11 10 0
East Caradon	95	3 18 6
ditto	80	3 9 0
ditto	75	6 6 0
ditto	70	4 0 0
ditto	62	3 15 6
ditto	56	4 11 6
ditto	37	6 12 0
Marke Valley	90	3 0 0
ditto	87	2 18 0
ditto	86	2 19 6
ditto	83	2 15 6
ditto	40	6 4 6
ditto	25	3 2 6
Okel Tor	98	3 13 6
ditto	96	2 7 6
ditto	70	3 4 0

Mines.	Tons.	Price.
Devon and Cornwall	75	£2 3 6
ditto	70	2 4 6
ditto	50	2 11 0
ditto	37	8 1 6
ditto	22	17 11 0
Bedford United	100	4 3 0
ditto	98	4 16 0
Brookwood	50	2 5 6
ditto	41	2 7 6
ditto	40	2 3 6
ditto	29	7 6 0
Wheal Edward	56	2 10 6
ditto	50	2 13 6
ditto	40	6 11 0
Wheal Friendship	59	9 5 6
ditto	57	5 14 6
ditto	4	20 2 0
Yarner Mine	100	2 12 6
Kelly Bray	58	5 8 6
ditto	29	2 3 6
New Cornish Mines	62	2 17 0
ditto	25	2 8 6
Lady Bertha	67	1 15 6
ditto	8	5 17 0
South Bedford	38	4 14 0
ditto	22	1 1 0
North Wheal Robert	39	4 16 6
East Florence	27	4 3 6
ditto	11	2 15 0
Fursdon	34	3 19 0
Collacombe	32	3 8 0
Sortridge Cousols	28	4 13 6
Hawkmoor	21	3 19 6
Great Tregune	7	9 7 6
Rabey's Ore	2	9 6 0

TOTAL PRODUCE.

Devon Great Con	2022	£10,237	11	0	£	237	6 6
East Caradon	475	2135	16	6		165	14 6
Marke Valley	410	1332	16	6		201	14 0
Okel Tor	264	812	3	0		188	3 6
Devon & Cornwall	254	1131	5	0		142	19 6
Bedford United	198	885	8	0		134	6 0
Brookwood	160	509	16	6		108	16 0
Wheal Edward	146	537	3	0		130	18 0
Wheal Friendship	120	953	19	0		83	9 6
Yarner	100	262	10	0		65	12 6
Kelly Bray	87	377	14	6		18	12 0
New Cornish	87				£	237	6 6
Lady Bertha	75					165	14 6
South Bedford	60					201	14 0
North Wh. Robert	39					188	3 6
East Wh. Florence	38					142	19 6
Fursdon	34					134	6 0
Collacombe	32					108	16 0
Sortridge Consols	28					130	18 0
Hawkmoor	21					83	9 6
Great Tregune	7					65	12 6
Rabey's Ore	2					18	12 0

Average Standard..... £128 0 0 | Average Produce 5⅝
Average Price per ton £4 8 6
Quantity of Ore ..... 4659 tons | Quantity of Fine Copper, 261 tons 9 cwts.
Amount of Money £20,653 15 0
LAST SALE.—Average Standard..... £119 7 0.—Average Produce 6⅞
Standard of corresponding sale last month, £130 16 0.—Produce, 5⅝.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	621	£3813 0 6
Freeman and Co.	318½	1141 6 0
Grenfell and Sons	565 5-6	2601 3 11
Sims, Willyams, and Co.	445 5-6	1987 2 2
Williams, Foster, and Co.	731	3492 15 6
Mason and Elkington	349	1548 16 6
Bankart and Sons	401½	1651 12 0
Copper Miners' Company	244	1012 3 0
Charles Lambert	315½	1136 18 0
Newton, Keates, and Co.	189½	739 2 2
Sweetland, Tuttle, and Co.	412½	1182 8 3
Penclawdd Copper Co.	115	347 7 0
Total	4659	£20,653 15 0

Copper ores for sale on Thursday next, at Tabb's Hotel, Redruth.—Mines and parcels.—South Caradon 478—Clifford Amalgamated 482—Phœnix 410—Tywarnhaile 333—West Damsel 320—Craddock Moor 227—Fowey Consols 210—Hallenbeagle 208—Great Wheal Busy 181—Great North Downs 173—Glasgow Caradon 160—Boscawen 106—Falmouth and Sperries 34—North Grambler 33—Grambler and St. Aubyn 16—East Wheal Ellen 16.—Total, 3336 tons.

Copper ores for sale on Thursday week, at Tabb's Hotel, Redruth.—Mines and parcels.—Clifford Amalgamated 730—West Seton 470—Wheal Seton and Pendarves 354—South Tolgus 230—North Roskear 205—East Grenville 197—Tolcarne 172—East Pool 167—South Frances 124—Wheal Basset 123—Nangiles 102—East Basset 89—Wheal Grenville 35—West Stray Park 31—South Condurrow 20—Total, 3049 tons.

WATSON AND CUELL'S MINING CIRCULAR.

WATSON AND CUELL,
MINING AGENTS, STOCK AND SHARE DEALERS, &c.
1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

Messrs. Watson and Cuell having made arrangements for transferring their weekly Circular, which has had so large a circulation during the past ten years, to the columns of the *Mining Journal*, their special reports and remarks upon Mines and Mining, and the state of the Share Market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium published in 1843 Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. Watson and Cuell have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share-dealing than there is at present; and, from the lengthened experience of Messrs. Watson and Cuell, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. Watson and Cuell transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt, and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. Watson and Cuell also inform their clients and the public, that they transact business in the public funds, railways, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. Watson and Cuell are almost daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. Watson and Cuell having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are enabled to supply shares in all the best mines at close market prices, free of all charges for commission.

We are now in the midst of a Panic—Banking and Commercial. Those who hold stock or shares in public companies are trying to realise at any sacrifice, while those who hold *money* will not part with it to buy *shares* at any price whatever, the general result being a state of affairs anything but pleasant to experience or contemplate. We have ourselves seen and passed through three of these panics: 1847 was bad enough, and the failures amounted to many millions sterling; the next, in 1857, was also very severe, and caused, at the time, just such a stagnation in business as there is now. People fancied the world (commercially) was almost at an end, and through the dark cloud could see no hope of an improvement. If you met anyone in the City, instead of the old and usual salutation of "Good morning," or "What a fine day it is," the exclamation was—"Any more failures?" or "They say So-and-so cannot hold out much longer;" and thus vague rumours and ugly remarks added to the general confusion of the times, which were bad enough in all conscience, without people every minute in the day trying to make them worse. Notwithstanding all this, however, things *did* improve again; and somehow the storm, so severe while it lasted, seemed to clear and purify the air; business revived; then it became brisker and brisker, and in process of time it rolled up like a snowball, and got again too big for its own safety, and there was a mania, as there always is at certain seasons, for all sorts of visionary schemes and public companies, into which the public rushed, heedless of all advice or caution, and out of which promoters reaped a rich harvest. New banks seemed to give anyone credit; and those who could not have obtained a penny advance from an old-established one, now got from the new whatever they wanted to overtrade or speculate with, and all at once found themselves in a state of credit astonishing even to themselves. It was not surprising, then, that for a time new banks and finance companies published accounts of almost fabulous profits to add to public infatuation, any more than it is now, that the reaction should change the nature of their balance-sheets and of public confidence. We may be wrong, but we consider the present difficulties are mainly owing to the facilities given to promoters and others by these financial companies; and severe as the storm now is, its effects will soon be apparent in a healthier state of affairs and a revival of business. In the meantime, so far as mining is concerned, pursers and managers, especially of calling mines, should endeavour to keep down the costs to the lowest possible point, and to increase the returns as much as they can.

Dyffryn Castell.—The new lode lately discovered here, 200 to 300 fathoms east of the shaft, has now been opened upon, and is 8 to 10 feet wide, containing good stones of lead ore over the whole width and length opened. The appearance of the lode, and the indications of a deposit of ore, are, as the agent informs us, of the first character. This is quite a new discovery. In the 10 fathom level cross-cut, under adit, in the old workings, good stones of lead have also been cut, some of the lumps weighing ¼ cwt. each. A parcel of blende is being prepared for sale, and altogether the prospects are excellent.

Bismuth.—The high price attained by this metal was due to a circumstance which would scarcely be suspected in the present day. A company was formed in London, under the direction of a foreigner, for the purpose of making gold. Very large premises were taken, and much apparatus placed in position to carry out the most recent attempts at transmutation. Bismuth was to have entered largely into the process, and all that could be obtained was purchased by the company regardless of price. Of course, no gold has been made, and to save out of the wreck as much as possible, the deluded shareholders are cautiously selling their stock of bismuth, so as to obtain as high a price as possible, and thus by a legitimate process convert it into gold. Few things can show more strikingly than this does the deficiency of knowledge amongst a large and respectable class of people. It was not long since that the writer of this notice was positively told by some gentlemen that they were about to extract aluminium from quartz, and if embarking a large sum of money in so wild a scheme may be regarded as a proof of their conviction that this was possible, that proof certainly existed. Still more recently a man, supposed to be an experienced miner, has returned from abroad, bringing with him what he regarded as very fine specimens of tin, whereas they are only crystals of wolfram (tungstate of iron), and consequently valueless. Such instances surely show the necessity of making some of the sciences part of our ordinary educational system. Attention is again being directed to the combination of tungsten with steel. Some years since Mr. R. Oxland patented a process for separating wolfram (tungstate of iron) from tin, and it was proposed to employ the tungstate of soda obtained in the process as a mordant, and the metallic tungstan as an alloy with iron. M. Jacob subsequently made steel, with tugsten in its composition, and carried out some large and apparently satisfactory experiments at Sheffield and in Austria. The results were so promising that M. Jacob gained possession of nearly all the sources of wolfram in this country. For several years, however, nothing has been heard of this alloy. Now M. Le Guen has solicited attention to what he calls wolframed pig-iron. Experiments have been made at Brest, and the pig tested was found to offer a greatly increased resistance when less than 2 per cent. of wolfram had been added to the iron. Another description of pig-iron, formed of one-third of best old English pig and two-thirds of the fragments of old cannon, with German wolfram mixed in the same proportion, show an augmentation of resistance equal to about 68 kilogrammes per square centimetre. Numerous other experiments of a similar character were made, the results appearing to be in all cases favourable to the wolframed pig-iron. There is much difference in the character of the tungstate of iron. The French wolfram, containing a little arsenic and sulphur, is not equal, even after roasting, to the German mineral, which is very pure. —*Quarterly Journal of Science.*

Mechanics' Industrial Fair in San Francisco.—Amongst the mining machinery exhibited at this fair is a fine steam-engine of 50-horse power, working with Green's patent cut-off. This engine is exhibited by the Pacific Foundry, of San Francisco, at which establishment it was manufactured. The engine is finely finished, and is a most creditable piece of workmanship. The Vulcan Foundry exhibits a rotary crusher, the same being an improvement on Howell's patent, by Mr. Moore. This machine reduces the quartz by rotary beaters, driven at immense velocity. These beaters striking the particles of quartz as it is thrown into the machine, reduce it at once to an impalpable powder. It has recently been introduced with great success at the Pike's Peak Mines. Blake's Stone Breaker, a machine whose capacity and effectiveness is well known in the Atlantic States and Europe, and which is now being extensively introduced into California, is exhibited by Mr. W. P. Blake. It is designed to prepare the quartz, and every other description of mineral for stamping. Mr. David Stoddart exhibits a steam mining pump, California made, compact, and of great power. It is designed to be placed in the bottom of a mine, and force the water to the surface. One of these pumps is now at the Union Mine, Mount Diablo. The one now on exhibition is also sold to a mining company to be delivered immediately after the close of the present exhibition. The speciality of these pumps is to force water to a high elevation. Mr. Stoddart also exhibits several of Gifford's Water Injectors for forcing water into steam-boilers. One of these injectors may be seen in operation upon the boiler which furnishes steam for the large engine which drives the machinery in the Pavilion.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly filed on receipt: it then forms an accumulating useful work of reference.

Iron Rust.—We notice in last week's Journal an article on Iron Rust, referring to an ochre found on an estate in the department de l'Yonne, France. Can any reader inform us if this ochre is to be obtained in England, and where?—B.

Separation of Gold.—I have seen notices in the Journal recently of a process of separating gold from its matrix by means of chlorine. If this process is put forward as original by any party, I beg to say that it is not so. In the lectures on the Great Exhibition of 1851, will be found in the part devoted to Metallurgy a process by the celebrated Plattner, of Freiberg, Germany, for separating gold from its matrix by chlorine, converting the gold into chlorine, and then precipitating by sulphuretted hydrogen. It was working at that time very successfully on ores containing less than 200 grains to the ton of ore.—Quartz.

Boring-Machine.—Seeing several questions asked relative to the power required for working the machine when boring in hard ground (it has been represented as 1 inch per minute), I much query its boring 1 inch per minute—say, in ground costing from 30*l.* to 40*l.* per fm. by hand boring. Mr. Crease should give reference to mines that are using them, not drag people long distances to see it tried at Tavistock. The practical results of these machines should not be hid from the public.—B.

West Caradon.—We adventurers who reside in the country, and are, consequently, unable to attend all the meetings of mines we may be interested in, are often indebted to your valuable Journal for information of what goes on regarding our property. At the last meeting of the West Caradon, I noticed that a shareholder said he had heard that one of the captains who had been officially employed by the committee to inspect the mine on behalf of the company was not underground more than "two hours." According to your report of the meeting, this was neither contradicted nor explained. Can any of your correspondents who know the Caradon district give us country readers any unofficial light in respect of the actual position and *bona fide* prospects of this so recently prosperous mine?—One of your Constant Readers: *Leicester.*

East Del Rey Company.—With a view of drawing the attention of my fellow-shareholders to our present position, I beg the insertion of the following in your valuable Journal. To the surprise of every shareholder who saw it, an advertisement, without date, appeared on Saturday, April 30 last, calling an extraordinary meeting for May 3 ensuing; the 1st being Sunday, there was therefore, only one working day between the advertisement and the meeting. At this short notice the shareholders present were called upon to ratify the purchase of the new mine, never contemplated, heard of, or known by any of them. Thus taken unawares, very few even of the London shareholders attended; but what shall we say of those living in the country, of whom I am one? With so summary an invitation, the great body at least of country shareholders knew nothing of the meeting until the resolutions said to be passed at it had bound them to an outlay and responsibility to which they had never been parties by any act of their own. Can this unaccountable astonishing proceeding be defended? I think not; and shall be ready to combine with others to prosecute the enquiry as to who were the promoters, the advisers, and the gainers by this unparelleled proceeding. [I enclose my card.]—A Country Shareholder.

Glan-y-afon and Gribbin Quarries.—Allow me to correct Mr. F. Davis in a statement or two. As soon as I read the Journal of Oct. 8 I wrote to a friend of mine at Llangynog to enquire about the pay at the above quarries, and his answer was not in accordance with the statement of Mr. Davis: I was also speaking to a Glan-r-afon man to-day (Saturday, 15th), who corroborated my friend. Now, if Mr. F. Davis's statement is correct, how could these people say it was not? Mr. Davis says the captain wrote him, stating, &c. I always thought the secretary was up to business, but it would appear that Mr. Davis was only half so. From what I know of mining, I thought secretaries the men to know how the concern goes on as to money matters, without writing to the captain to enquire.—A Farmer.

"A. J. F." should write to the Chairman of the Mining Exchange, Spread Eagle-court, Royal Exchange, London.

Great South Chiverton.—I noticed in last week's Journal a communication from the secretary of this mine, and in drawing attention to that communication I would have it distinctly understood that I am not the exponent of "A Shareholder," whose letter in the previous week's Journal is replied to. But that reply appears to a disinterested individual to be laid open to one of two interpretations. If the terms in which this reply is couched were dictated by the committee, whose servant it must be admitted the secretary is, then the simple question arises—Are the committee really serious when they state that they "know of no dissension," nor of the "swerving from any compact?" Taking, however, the other interpretation, that the secretary has—perhaps, unwittingly—taken upon himself the responsibility of replying without the knowledge of the executive, then, of course, the only conclusion one can come to is that it is "to be regretted" he has been so incautious as to usurp a prerogative which he does not legitimately possess.—X. Y. Z.

The letter on the Dolcoath Mine meeting shall appear in next week's Journal.

Share Dealing.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

Received—Mentor—P. H. W.—E. H. Dingle—L. M.—W. Wrey—M.

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, OCTOBER 22, 1864.

The Report of the Commissioners appointed to enquire into the Condition of all Mines in Great Britain to which the provisions of the Act 23 and 24 Vic., cap. 151, do not apply, and to suggest the most practicable means of improving the health and safety of persons employed in such mines, has now been printed, together with an epitome of the evidence taken, and an elaborate appendix, containing medical reports upon the condition of miners, reports upon the air of mines, and much other useful information. The Commissioners have visited and inspected the principal mines in Cornwall, Devon, Northumberland, Westmoreland, Cumberland, Durham, Lancashire, Yorkshire, Shropshire, Wales, Cheshire, and Derbyshire, and have examined many persons connected with mines competent to give information respecting them. The report is drawn up in the most systematic manner, and every facility is afforded for ascertaining the comparative healthiness of the miners in the several districts.

It is observed that Cornwall, having been for centuries the chief source of our mineral supplies, the continuous workings have greatly complicated the operations necessary at the present time for extracting the ores. The consequence is that in respect to health the Cornish miner bears a very unfavourable comparison with every other class of the community. The report states that, at a comparatively early age, the miners almost invariably exhibit in their features and persons the unmistakeable signs of debilitated constitutions. Their faces are sallow, they have an anxious expression of countenance, and their bodies are thin. At the border of middle age, or soon after, their health begins to fail; the maturity and confirmed strength of that time seems to be denied to them; they rapidly acquire the feebleness of declining years, and become unfit for laborious work, at the time when their experience would otherwise have made them valuable workmen. The first symptoms of failing health amongst miners are weakness in the limbs in climbing the ladders and beating the borer, shortness of breathing, giddiness, and pains in the head; their appetite fails; they are unable to take or to digest an adequate amount of food, and often suffer from sickness and vomiting. From want of sufficient investigation hasty, and in many instances erroneous, returns of the cause of death have been made by the mine doctors to the district registrars. From the disease peculiar to miners being commonly registered as consumption, it has been by many supposed to be identical with phthisis, or tubercular pulmonary consumption; but it is proved by the evidence of the medical witnesses that though some miners, and especially those whose families are predisposed to the affection, do die of consumption, by far the largest amount of mortality is due to lung diseases of a bronchitic or asthmatic character.

The vital statistics are very unfavourable to the metalliferous miners, the mortality amongst them being not only above that of males not miners, but actually very considerably above the mortality amongst coal miners, who have, of course, the deaths from explosions to increase the average. Of the subjoined tables, the first shows the average annual number of deaths per 1000 males, exclusive of miners; per 1000 northern coal miners; and per 1000 Cornish metalliferous miners, during a period of five years; whilst the second shows the comparative mortality amongst the three classes, the mortality amongst males, exclusive of miners, being taken as 100:—

Ages.	Table I. Males, exciuding miners.	Table I. North. coal miners.	Table I. Cornish metalliff. miners.	Table II. Males, exciuding miners.	Table II. North. coal miners.	Table II. Cornish metalliff. miners.
From 15 to 25	7·12	8·50	8·90	100	119	125
„ 25 to 35	8·84	8·49	8·96	100	96	101
„ 35 to 45	9·99	10·13	14·30	100	101	143
„ 45 to 55	14·76	16·81	33·51	100	114	227
„ 55 to 65	24·12	24·43	63·17	100	101	263
„ 65 to 75	58·61	65·16	111·23	100	111	189
Average	20·57	22·25	40·00	100	107	175

To a very great extent these figures explain themselves; whilst the mortality amongst the northern coal miners is only 7 per cent. above the average for the general population, the mortality amongst the Cornish metalliferous miners is 75 per cent. above the average, or, in other words, deaths amongst miners are nearly twice as frequent as amongst the other portion of the population. Comparing the mortality amongst Cornish miners, as shown by the return for the five years ending 1853 (that comprised in the above table) with that of the three years ending 1862, there is decidedly worse than no improvement, and yet the Cornish mortality is not so great as that amongst other metalliferous miners. In the report it has, of course, been necessary to compare the mortality amongst the miners with the mortality amongst the other portion of the population; it will, therefore, be necessary, in order to show the relative healthfulness of the miners in the several districts, to calculate all to the fixed number 100, representing the mortality amongst the males of the general population.

With regard to the lead mines of Yorkshire and the northern counties, the report states that, besides the fissures filled by metalliferous and other mineral deposits, there are many which remain void. The latter sometimes form an important part in the economy of a mine, by carrying currents of fresh air from above, and abstracting the drainage water below, while in others they become sources of annoyance, sometimes of danger, by allowing water or injurious gases to accumulate until accidentally tapped by the miners. The surface of the country in the immediate vicinity of the mines is, for the most part, wild moorland, and the miners reside in small villages lower down the valleys, and have to walk from two to four miles to and from the mine. In some districts small parcels of land are attached to the miners' cottages, enabling them to keep one or two cows, and affording them healthful employment in the open air, which, combined with the fresh air they breath in walking to and from their work, to some extent counteracts the injurious effects of previous exposure to the vitiated atmosphere of the mines. The circumstances which are mainly influential in favourably affecting the sanitary state of the men working in these mines are considered to be the comparatively short period in each week during which the men work in the mines, the ready access to the mines without having to climb the ladders to any extent, the natural temperature of the workings, and the length of time during which they are left free. The subjoined shows the annual average number of deaths per 1000 during the three years ending 1862:—

Ages.	Males, excluding miners.	Metal miners.
From 15 to 25	7·57	9·53
„ 25 to 35	9·19	12·38
„ 35 to 45	10·13	17·64
„ 45 to 55	16·18	33·11
„ 55 to 65	29·38	78·24
„ 65 to 75	66·10	127·52

In Wales and Shropshire the mortality amongst miners is also extremely high, as compared with the other portions of the population. It is remarked that small setts, called Poor Men's Ventures, are occasionally granted to individuals, especially in Flintshire. These adventurers work the mines themselves, in many instances, after leaving their work at the larger mines, thus prolonging the hours of their underground labour. Having no capital to spend in properly opening up the mines, the men suffer all the evils arising from imperfect ventilation, and from the want of the other provisions necessary to ensure health and safety. The average annual number of deaths per 1000, during the three years ending 1862 was—

Ages.	Males, excluding miners.	Lead miners.
From 15 to 25	7·46	6·04
„ 25 to 35	10·52	15·72
„ 35 to 45	12·57	18·05
„ 45 to 55	15·19	25·74
„ 55 to 65	28·11	55·19
„ 65 to 75	75·78	86·96

As in the other metal mining districts, the excess of mortality is mainly due to the excess of deaths from pulmonary diseases. The arrangements for securing medical attendance to the miners appear to be most imperfect in all districts. In Cornwall the relief afforded by the club extends, in most cases, to "visible hurt" only; and the "doctor," it is remarked is generally appointed by the adventurers or shareholders, and an impression prevails among the men that other reasons than those of professional qualification may influence the selection. The doctor often resides at a distance from the mine, and, unless he appoints a qualified assistant, proper medical aid is not very accessible to the sick miner. The system often gives great dissatisfaction, and, though some of the witnesses consider the election of a doctor by the men objectionable, there does not appear to be any sufficient reason why the miners should not be at liberty to apply for medical aid to any qualified practitioner residing in the district who may be willing to attend them at the fixed rate of charge per head. In Yorkshire and the northern counties the system of medical attendance varies considerably in different districts. In several instances the miners elect the doctor; in others each miner selects his own medical attendant, who is then paid out of the club money, whilst in some medical attendance is provided by the proprietors, without any charge to the men. In Wales, accident clubs are rare, but for doctors the men subscribe as in other mines, and, with very few exceptions, choose their own medical attendants, the system of selection by the adventurers having been abandoned.

The mines of carbonate of iron in the Cleveland hills, near Redcar, though recently opened up, are extensively worked. The entrance is from the day, and levels are driven of considerable dimensions; in one of these a furnace was in operation, and with such good effect that the men were enabled to drive as far as 1830 yards from the day without inconvenience from powder-smoke. The hematite iron miners in the district of Furness, in Lancashire, are a robust race, and as healthy as other men engaged in equally laborious occupations, and free from those affections which are so productive of diseases and premature failure of power in the men employed in tin, copper, and lead mines. To compare the relative healthfulness, the subjoined table is calculated with the fixed number 100 to represent the average mortality of males, exclusive of miners in the several districts:—

Ages.	Males, exciuding miners.	Cornish metal miners.	Yorkshire metal miners.	Wales and Shropshire.
From 15 to 25	100	126	126	81
„ 25 to 35	100	115	135	149
„ 35 to 45	100	150	174	144
„ 45 to 55	100	238	205	169
„ 55 to 65	100	317	267	196
„ 65 to 75	100	207	193	115

From a careful consideration of the evidence taken, of the reports prepared in the course of the enquiry, and from the knowledge acquired by visiting the districts comprised in the terms of the Royal Commission, and by inspecting mines therein, the Commissioners have come to the conclusion—1. That there is a great excess of sickness and mortality amongst metalliferous miners, which is mainly attributable to the imperfect ventilation of the mines.—2. That several other causes, both general and local, largely contribute to impair the health of the miner—exposure to cold and wet, and to sudden alternations of temperature; wearing wet clothes, inhalation of gritty particles, and the exertion of climbing ladders from great depths.—3. That accidents are of frequent occurrence in metalliferous mines, and that they principally result from miners falling from ladders and stemples, or from one level to another, from falls of rock or stuff, from want of caution in blasting, from defective gear and imperfect supervision of machinery, from sudden irruptions of water or foul air, and from the bursting of boilers.—4. That abandoned shafts and old workings unprotected at the surface are a cause of serious danger, not only to the miner but to the public.—5. That the employment of boys underground at an early age contributes to produce disease and premature death.—6. That the system of mine clubs, as at present in general operation, is unsatisfactory, as not providing for cases of sickness as well as of accident.

As a remedy for some of these evils, the Commissioners recommend two or more shafts or adits, so contrived that one shall be the upcast in all states of the weather; that every mine should be provided with proper houses, conveniently situated, in which the men can change and dry their clothes; that surface work should, as far as practicable, be carried on under shelter, and that suitable places should be provided in which the women and children employed at the mines might take their meals; that in order to avoid the evils consequent on climbing ladders, mechanical means should be provided to convey the men to and from the surface, when the mines are of great depth; that no ladder-way should be allowed in a drawing-shaft without the shaft being properly divided or bratticed off from the footway, and that efficient sollars should be fixed at moderate distances in all footways, whether the ascent or descent be by ladders or stemples; that shafts, winzes, sumps, and shoots should be more carefully guarded; that more stringent rules should be enforced in regard to blasting, with a view to preventing accidents, and that bronze tamping-rods and prickers should be supplied to the men; that the persons having charge of the footways and other works underground should daily enter in a book a report of their condition to the agent or captain of the mine, which should be produced in case of enquiry; that the boilers and other machinery should be periodically examined by the mine engineer, and that a monthly report thereon should be given in to the captain or agent, to be produced by him should occasion require; that men should not be allowed

to change in the boiler-house, which none but those in charge should be permitted to enter; that all boilers should be provided with two safety-valves and a water-gauge, or a steam-whistle; that plans and working sections of all mines, on their being abandoned, should be deposited at the office of the clerk of the peace for the county, and at the Government Mining Record Office, in Jermyn-street, for reference in case of working being resumed, or new mines opened up in the immediate vicinity; that an efficient and easily available legal remedy should be provided in order to guard the public from that prolific source of danger—the leaving of abandoned shafts and old workings unprotected; that, as a general rule, no boys under the age of 14 should work below the surface; and that there should be adopted such a system of mine clubs as would afford the men sufficient maintenance during sickness, as well as whilst suffering from the effect of accident.

The report, of which the foregoing is an epitome, and which is highly interesting throughout, we shall publish in extenso in next week's *Mining Journal*, and in the meantime we may observe that by the indefatigable exertions of Lord Kinnaird (the Chairman), in connection with the Commission, he has entitled himself to the best thanks of all who desire that metalliferous mining should be rendered a more healthful occupation; since, in addition to performing the duties of the office in a most efficient manner, he has been at the trouble of designing an improved and cheaply-constructed changing-house, and has supplied an admirable code of rules for a Miners' Provident Benefit Society, prepared by Mr. J. Tidd Pratt, and carefully reported upon by one of the most efficient actuaries in the City of London.

The application of waste products, resulting from various manufacturing operations, has lately, in some instances, been attended with very advantageous results. Thus, for instance, the coal tar produced in the manufacture of gasfor lighting, though it was at one time, not very remote, an incumbrance which involved some trouble in getting rid of, is now the source of those beautiful dyes—mauve, magenta, &c., which afford the fair sex so much gratification, and have brought into existence an entirely new branch of manufacturing industry, affording employment for a great number of people, and a profitable means of investing capital. In metallurgical operations the waste of the sulphuric acid manufacture from pyrites has now become such an important source of copper, as in the opinion of many to threaten an entire transfer of the copper smelting business from Swansea to the banks of the Tyne.

The waste products of other smelting operations are characteristic for their abundance and their uselessness. Among these none, perhaps, has hitherto been more remarkable in this respect than the slag produced in smelting iron ores—none which from its uselessness has given rise to greater difficulties in disposing of it—none which it would be more desirable to turn to some useful purpose. This has, indeed, often been attempted, but never with any degree of success that was at all important. The plan of casting the slag into blocks to be used for building, of which so much was promised some years ago, has never been divested of those disadvantages which arise from the spliting and cracking of the blocks after cooling, so that it is never applied except in the immediate neighbourhood of blast-furnaces, and for the roughest purposes.

It is with satisfaction, therefore, that we are able to direct attention to the invention of an improved mode of applying blast-furnace slag to building purposes, which has lately been devised by Mr. Parry, of the Ebbw Vale Ironworks, the more so since this method appears to strike at the root of the difficulties which have hitherto been insuperable obstacles to the application of blast-furnace slag. By applying a blast of air, or a jet of steam, to the slag as it runs from the smelting-furnace in a melted state, it is suddenly cooled, and reduced to a state of extreme subdivision, so as to be easily reducible to powder, an operation that would be entirely out of the question for any practical purpose with the slag in its usual stony condition. By this ingenious device, the slag is converted into a material eminently suitable for the purposes of brickmaking, and for the manufacture of artificial stone, and it is also proposed to use it as a manure. To anyone who has visited iron-smelting works, and seen the enormous mountains of slag, or, as it is technically termed, "cinder," growing around them, and covering land which would else be available for other purposes, the importance of any means of rendering this material useful will be at once apparent. Those who have not had this opportunity of judging will readily understand the importance of the subject, on considering that for every ton of pig-iron made, some 3 or 4 tons of slag are produced, and that the present make of pig-iron in this country amounts to the enormous quantity of four and a half million tons a year.

The advantage of turning this waste slag to account would be almost incalculable, for not only would the profit of the ironmaster be increased, but the cost of iron might be reduced, if Mr. Parry's method of using the slag should result in that success which there is every reason to anticipate it will meet with. Another point which is deserving of notice in regard to this application is that it is one which in its magnitude bears some proportion to that of the production of the material sought to be used. The rapid progress of building and of engineering operations is such as to offer a promising future to any good plan of providing materials for construction from other sources than those hitherto available, and probably of better quality than they have hitherto been obtainable. The manufacture of bricks is one of those arts which has remained, probably, more stationary than is the case with most branches of industry, and the activity which has of late years been manifested in the attempts to produce artificial stone or building blocks shows that there is a want of something more and, if possible, better than the old fashioned clay brick, which has, in its time, done good service, and is, therefore, not to be despised, but which, in common with all other things, is liable to be superseded in the ordinary progress of improvement, and in consequence of the development of new requirements and new resources. We sincerely hope that this interesting invention of Mr. Parry's may prove to be all that he can hope and all that can be desired, both in advantage to himself and to the community generally.

A New Method of Extracting Gold from Auriferous Ores.—The following paper was read in the Chemical Section of the British Association, by Dr. Crace-Calvert, F.R.S.:—At the present time, when the auriferous ores of Great Britain are attracting public attention, it may be advantageous to persons interested in gold mining to be made acquainted with a new and simple method of extracting gold from such ores, which presents the advantages of not only dispensing with the costly use of mercury, but of also extracting the silver and copper as well as the gold which the ore may contain. Further, it may be stated that the process may be profitably adopted where the amount of gold is small, and the expense of mercury consequently too great. Without entering here into all the details of the numerous (about one hundred) experiments which I made some years since, before I finally arrived at the new method of extracting gold which I have now the honour of communicating to the meeting, allow me to state a few facts which are necessary to give a general view of the subject. If 2·2 parts of pure and finely divided gold, obtained by the reduction of a salt of that metal, be added to 100 parts of pure sand, and placed in a bottle with a saturated solution of chlorine gas for twenty-four hours, only 0·5 of gold is dissolved. If the same experiment be repeated, but instead of chlorine water a mixture of chlorine water and hydro-chloric acid be used, 0·6 of gold is dissolved. If, instead of employing hydrochloric acid and chlorine gas, a mixture of sand, reduced gold, and peroxide of mangsnese, with hydrochloric acid, are placed in a bottle, 1·4 of gold is dissolved; so that it would appear that, under the influence of nascent chlorine, the gold is more readily dissolved than when the same gas is mixed in solution with hydrochloric acid previously to being placed in contact with the auriferous sand. Still these processes leave a great deal to be desired in a commercial point of view, as more than a third of the gold remains undissolved; and the same results are obtained if the chlorine gas be generated by another method—viz., by adding to the auriferous sand a mixture of chloride of sodium, sulphuric acid, and peroxide of manganese. Being convinced, therefore, that nascent chlorine gas was a fit and proper agent for chesply extracting gold from ores, and that it was only necessary to modify the method of operation, I allowed the mixture of hydrochloric acid and peroxide of manganese, or of sulphuric acid, peroxide of manganese and chloride of sodium, to remain for twelve hours in contact with the auriferous sand; and then, instead of washing out the solution of gold, I added a small quantity of water, which removed a part of the acting agent, and this was made to percolate several times through the sand; by which method I succeeded in extracting from the sand, within a fraction, the whole of the gold. I then repeated the last experiments with natural auriferous quartz, and easily extracted the 2 ozs. of gold per ton which it contained. I, therefore, propose the following plan for extracting the gold on a commercial scale:—The finely-reduced auriferous quartz should be intimately mixed with about 1 per cent. of peroxide of manganese; and if common salt be used, this material should be added at the same time as the manganese, in the proportion of three parts of salt to two of manganese. The whole should then be introduced into closed vats, having false bottoms, upon which is laid a quantity of small branches covered with straw, so as to prevent the reduced quartz from filling the holes in the false bottoms. Muriatic acid should then be added if manganese alone is used, and diluted sulphuric acid if manganese and salt have been employed, and, after having left the whole in contact for twelve hours, water should be added so as to fill up the whole space between the false and true bottoms with fluid. This fluid should then be pumped up and allowed to percolate through the mass, and after this has been done several times the fluid should be run off into separate vats for extracting the gold and copper that it may contain. To effect this, old iron is placed in it to precipitate the copper; and after this has been removed, the liquor is heated to drive away the excess of free chlorine, and a concentrated solution of sulphate of protoxide of iron, or green copperas, is added, which, acting on the gold solution, precipitates the gold in a metallic form. By this method both gold and copper are obtained in a marketable condition. If silver is present in the ore, a slight modification in the process will enable the operator to obtain this metal also. It is simply necessary to generate the chlorine in the vitriol, manganese, and chloride of sodium process, taking care to use an excess of salt, that is, six parts instead of three, as above directed. The purpose of this chloride of sodium being to hold in solution any chloride of silver that may have been formed by the action of chlorine on the silver ore, and to extract the metal, the following alteration in the mode of precipitation is necessary:—Blades of copper must be placed in the saline solutions, to throw down the silver in a metallic form, then blades of iron to throw down the copper, the gold being then extracted as previously directed. I think the advantages of this process are—1, cheapness; 2, absence of injury to the health of the persons employed; 3, that not only is the metallic gold in the ore extracted (as is done by mercury), but it attacks and dissolves all gold which may be present in a combined state, besides enabling the miner also to extract what silver and copper the ore may contain. I cannot, however, conclude without reminding you of what is generally underrated—that is, the heavy expenses which attend the bringing of the ore to the surface, and its crushing and preparation to render it in a proper state for being acted upon either by mercury or any other agents.

Utilisation of Town Sewage—Important Suggestions.—At a numerously-attended meeting of the Farmers' Club, at Croydon, on Tuesday (Mr. R. W. Fuller in the chair), an important paper, "On the best Means of Deodorising, Solidifying, and Granulating the Sewage of Towns, and applying it to Agricultural Purposes," prepared by Mr. Martin, was read by Dr. Pearce. After some general allusions to the utilisation of town sewage, as one of the great question of the day, the paper described fully the new deodorising material employed by the National Sanitary Improvement Company in the operations they are now carrying out in many places, and, amongst others, at Brighton, Hounslow, Sheerness, and other *barracks*, under contracts with the War Department of the Government. The substance used is a preparation of which the larger portion is exhausted tan in a charred state, a cheap material, which tanners are extremely glad to get rid of, and which is frequently a serious expense to them to remove. Put in proper quantities into a cesspool of the worst description, all noxious odours are at once neutralised, and the whole of the mass, liquid as well as solid, is absorbed by the material. It is then in a state in which it may be placed in bags and carried to the farm, where it may be applied either like guano or drilled in with seed, alone or mixed with phosphates, when it has been found to possess fertilising powers equal to guano, but more durable. This was explained as arising not merely from the extremely porous nature of the material, and the known powers of charcoal to greedily take up ammoniacal and other fertilising ingredients, but from the fact that, instead of giving a large proportion of them forth again in waste to the atmosphere, it retains everything until the rootlets of the plants extract their virtues. With regard to *sewage*, it had been tried, and found that when sewage passed through a charging of this material all the valuable portions are retained, and the water comes forth odouriess, and almost as bright and pure as from a spring. Another mode of using the deodouriser was described, which, if applied to the metropolis, would *render useless* all the enormous expenditure of the Board of Works in sewers and outfalls. Sewers originally were little besides drains, by which the rainfall upon the streets and roofs was conveyed to the rivers in a state which probably did them no harm. It was only since the use of water-closets had become general that the rivers had been poisoned, and the public health endangered. If, then, *instead of water-closets* we constructed *dry closets*, with pans arranged so as to apply this absorbent deodoriser, their contents could be removed every day, or every few days, by the dustmen, without the slightest annoyance or inconvenience to the inhabitants, while nothing would pass down the sewers more than formerly of a noxious character. Thus the rivers would be as pure as in old times, and the sewers would become simply surface and household drains. The practicability of this idea had been proved on a large scale at the Hounslow Barracks, where the latrines had been converted into dry closets. Their contents were taken away in bags daily, and a new charging of the deodoriser placed therein. This was an important change, so far as the health of the soldiers was concerned, for all injurious and noxious smells were completely prevented, while the manure thus obtained was in great request by the farmers, and the whole easily disposed of. A somewhat lengthy discussion followed, which turned, however, rather upon the comparative merits of liquid and of dry manures; and, several objections having been answered by Dr. Pearce and Mr. Martin, a vote of thanks was unanimously given to the latter gentleman for his valuable paper, and the proceedings terminated.

Manufacture of Zinc White.—An invention has been patented by Mr. George Darlington, of Minera, which consists in the production of zinc white (white oxide of zinc) from oxidised compounds of zinc, such as roasted blende, calcined calamines, zinc ashes, zinc dross, or old zinc, by mixing such materials with coal or coke from which all their original gaseous matters have been expelled by heat or any other well-known means, the proportion of such admixture being usually about 3 parts of fuel to 1 part of metal contained in the ore, but such proportion being necessarily dependent upon the fusibility of the gangue of the ore, the proportion of fuel to be increased or decreased as the ore is difficult or easy of fusion; and he places such a mixture in a blast-furnace, in which the said mixture or charge is kept in a state of combustion by the passage through it of numerous jets of air entering the said furnace through blast orifices, such air being supplied by a blast-engine either in a hot or cold state; and he further completes the oxidation of the zinc fumes which will be produced by this means by the admission of fresh air, either heated or cold, into the said furnace immediately above the surface of its contained charge, such air being forced into the said furnace through numerous apertures by a blast machine, and in order to render the process more perfect he exhausts the gaseous and volatile contents of the said furnace containing the oxide of zinc which will be produced by this arrangement, by means of an exhaust-engine, either cylinder, fan, or other similar machine, which shall effect exhaustion. Upon the bottom of the furnace, (which is somewhat similar in form to the old coke oven, and through which several hundreds of small blast pipes pass) he places a mass of fuel, and gently turns on the blast; as soon as this fuel is thoroughly incandescent, he adds the charge of ore and fuel, which are already intimately mixed, and the ore ground to the size of peas and well dried, while the fuel has not only been heated in the same manner but has been throughly ignited to drive off all volatile matters, and kept in the condition of red heat for an hour, this part of the process having been effected in a separate furnace. This mixture should have a proportion of about, on an average, one pound or part of fuel to one pound or part of metallic zinc in the ore, but if the ore should have a very refractory gangue, such as sulphate of baryta, carbonate of iron, silic, or alumina, it may be necessary to increase this quantity of fuel, or if the ore be very soft and fusible to diminish it. The charge in a furnace of a sectional area of about 27 ft. (the best size, he believes) should be about 5 cwts., and is projected or thrown into the furnace through a door which may be opened and shut in its front; shortly after the introduction of the charge the blast which has been slowly allowed to play through the contents of the furnace while charging will now be allowed full play, and for awhile the gaseous products of the furnace allowed to escape into the open air through an aperture in the top of the furnace left for this purpose. When these gases become green in colour this aperture is closed and the exhaust apparatus is put into action, at the same moment the oxidising air is allowed to enter the furnace, this air enters the furnace, say, six inches above the level of the charge in it, and enters through numerous small blast pipes perforating the furnace; by this means the metallic zinc produced in the first instance by the action of hot carbon on the oxide of zinc contained in the ore is perfectly oxidised, and all carbon or carbo-hydrogen compounds from the fuel are consumed and converted into carbonic acid and water, and a perfectly white oxide of zinc produced, which last, mechanically mixed with the furnace gases, is conveyed into the collecting apparatus by the suction or exhaust arrangements alluded to.

Steel Manufacture in Bordeaux.—Among the few manufactories of this district there is one which has recently attracted some attention; it is the steel manufacturing establishment, situated on the River Lisle, an affluent of the Dordogne, known under the name of "Les Acieries de Saint Seurin." In it three different systems of treating the metal are employed. Firstly, the cementing process; secondly, the system of Bessemer; and thirdly, the old process of melting in small pots a mixture of steel and iron, in order to obtain different qualities of cast steel. The principal manufacture is that of bar steel, both rolled and hammered, for all purposes. In many industries the use of steel is rapidly superseding that of iron, consequently there is an increasing demand for large blocks of steel worked down to different shapes by the steam-hammer. The manufactured articles are chiefly confined to springs for railroad and other carriages, the quantity turned out being estimated at from 80 to 100 tons a month; and rails, conical bolts and balls, for the French Ordnance Department, are also being manufactured. About 400 hands are employed in this establishment, of whom ten are British subjects. The coal consumed up to the present time has been almost exclusively British, amounting to about 12,000 tons annually; but measures are to be taken to employ the French coal from the department of the Aveyron, as the quality has greatly improved of late, and the price is considerably below the English. About 2000 tons of English pig-iron, chiefly from Camberland, are annually converted into Bessemer steel, and 200 tons of bar-iron are imported from Sweden for cementing purposes. But here, again, a change is contemplated, for the intention of the company is to treat French iron in place of British. No English capital is engaged in the concern. That represented by the establishment is 68,000*l.*, besides a loan from the French Gorernment of 48,000*l.*, which has been laid out in buildings and machinery.

Cleveland Iron.—During the last fortnight a considerable change has arisen in connexion with the sale of pig metal in the Middlesbrough district, it being well known that the production is considerably beyond the local demand. So long as the state of trade in Staffordshire and Glasgow continues good, the absorption of the pig metal beyond what the district required, coupled with the speculative demand arising out of the establishment of the Middlesbrough Exchange, has helped to keep up prices extremely well. The great reduction in the Glasgow market, amounting to 7s. or 8s. per ton, has been followed—but we are happy to say not to the same extent—in the quotations of prices on the Middlesbrough Exchange. When we say quotations we can scarcely say sales—they have been so few. The present condition of the Money Market, it is well known, has almost entirely stopped speculative transactions, and in no trade more so than iron. The result is that, with all the furnaces in blast, and Mr. Samuelson's furnaces in addition to our last week's statement, pig metal is being put to "stock" by the makers; and we have reason to think to a considerable extent on their own account. It is satisfactory to note that the difference in price of the Cleveland metal at Middlesbrough and the Scoteh metal at Glasgow is now less than at any former period, amounting, in fact, to scarcely 2s. per ton. We hope, however, that both will advance shortly, with an easier condition of the Money Market, and as they do that, the relative differences will not be increased. We think it is likely to be so, as undoubtedly the Cleveland iron is being more and more appreciated—a return of speculation would speedily take up any metal at liberty, the growing demand of local manufacturers will ensure a similar proportion of pig metal for other districts, and a consequent hardening of prices. It is certainly the case that, with the additional furnaces to come into blast in the course of a few months, the make of pig metal will be considerable increased; and the extensive additions going on at the works of Messrs. Barningham and Co., Hopkins and Co., and others, and the commencement of new works, such as those of Messrs. Fox, Head, and Co., at Newport, will more than equal in consumption the additional make of pig metal. Owing to the disturbed state of affairs in Staffordshire, puddlers and other skilled hands are plentiful, and are likely to be so. This is of great importance, as the demand is considerable, but the supply is undoubtedly greater than the demand, and good hands have been waiting for some weeks for the employment promised them at the different new works. Messrs. Barningham are each week increasing their puddling and rolling operations; Messrs. Fox, Head, and Co. made a start on Tuesday last; and Messrs. Hopkins and Co. are still further extending their puddling furnaces and mills. While, therefore, we have to report unsatisfactorily of the pig metal trade, we have no reason to believe that there is the slightest amount of adversity as regards the more advanced stage of iron making. It will be some time ere the present orders for plates, rails, and bars are exhausted, and we trust long before that time arrives the financial condition of the country will be in a settled and satisfactory state. At Grosmont, near Whitby, the first sod of a new blast-furnace was cut a few days ago. The works are to be carried on under the management of Mr. Joseph Nicholson, engineer to the contractor, Mr. G. E. Forster, of Washington. Mr. Nicholson is also about to commence to take a new branch railway from Beggar's Bridge to Winton Gill. The length of the line will be six miles. The work will begin immediately. The railway is to be constructed for Messrs. Snowdon and Co., ironmasters, Stockton-on Tees, who are about to work a large royalty of ironstone, similar to the Rosedale stone.—*Darlington and Stockton Times.*

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Oct. 20.—The demand for iron is at the present moment decidedly quieter, and very few orders are coming in. Still, makers of plates, and sheets especially, have several weeks' orders in advance, and can afford to wait for fresh contracts, which are now, no doubt, kept back on account of the present state of the money market, the high rate of discount, and still more, the distrust which exists, and which makes commercial men anxious to strengthen their balances, and to keep down to the lowest point the demands upon them. The same cause operates in the Hardware Trades, and a similar state of things exists; a fair amount of orders being in hand, but rather few coming in. The Pig-iron Trade is very dull; where sales are effected deliveries are deferred, and no one is willing to do anything beyond present needs.

The Strike is still the grand topic, and the really vital question of present importance. The men in the Bilston and Wolverhampton districts have generally given in. They did so to a large extent last week, and on Saturday Mr. Samuel Griffiths, the well-known metal broker of Wolverhampton, addressed a meeting of some two thousand at Bilston, where he is popular, advising them, at the request of the strike committee, to discontinue the struggle, as one altogether hopeless. His speech, which was marked by much tact, was respectfully listened to, and at its close two members of the committee proposed and seconded a proposition in favour of returning to work, but no single person held up a hand in response to the appeal. The result, however, was that the strike committee was disbanded, and on Monday morning the men very numerously went to work, and more have gone in since. Many also went in at various thick coal mines on both sides of Dudley, where the strike began, and it appeared pretty clear that the struggle was dying away. On Wednesday morning, however, a great meeting was held at Tipton, and vast bodies surrounded the mines where the men had gone to work, and induced them to desist, or not to go down the pits. A vast meeting was afterwards held at Oldbury, at which it was announced that there was "a resurrection of the strike," and those constituting it, with banners and bands, formed a procession which filled the highways for a mile, and marched to West Bromwich, where there was more speaking, more resolving not to yield, and the assembly dispersed quietly, after singing "Praise God, from whom all blessings flow." The spectacle is really a sad one, these poor fellows evidently finding their fainting hopes strengthened by the aggregation of large crowds, and resolving to pinch and suffer on with themselves and their families starving, under the influence of the idea that this is the way in which their permanent interests can be best advanced.

To-day the course of events has been less peaceable. This morning the police and a party of men on strike, between Dudley and Tipton, came into collision on the question of intimidation, and the result was that 19 men were captured, and were conveyed to Bilston, where a special sessions was held to examine them. At mid-day about 6000 miners marched to Dudley, and the greatest anxiety for the preservation of the peace is necessarily felt. Two influential speakers have this week commented on the strike. At the Staffordshire Quarter Sessions, on Monday, the Earl of Lichfield, who is the Chairman, as well as Lord-Lieutenant of the county, in his charge to the grand jury alluded to the extension of the Factory Acts to the pottery trade, as a measure likely to exercise a most beneficial influence. The other commentator on the question was Mr. Powell, Q.C., the Recorder for Wolverhampton, and Member of Parliament for Bristol, who addressed a meeting on Wednesday evening, in connection with the Wolverhampton Working Men's College. He denounced strikes as a most barbarous and pernicious mode of settling disputes between men and masters, and for a remedy he pointed to France, where such disputes were arranged by the *Conseils des Prudhommes*. Whether it is possible to fix the rate of remuneration for labour by the decision of a body appointed for that purpose is a very great question, and one must hear more about the working of this system in France with respect to the adjustment of wages in the labour market before an opinion can be formed. The present strike would be impossible in France, because a meeting of 20 persons, except when authorised by the Government, is illegal, and without great meetings the strike would speedily cease. It is now probable that the true remedy for strikes is to be found in doing away with the artificial customs which have led to the equalisation of the wages of artizans and labourers, who are really not of equal, but of very unequal value; so that individuals in seeking to promote their own interests, and acting freely, would naturally find the true, real level of their labour in the market. The system of reducing men to one level is a very pernicious one, and is the source of a vast train of evils.

REPORT FROM DERBYSHIRE, YORKSHIRE, AND LANCASHIRE.

Oct. 20.—The reports current as to the state of the Iron Trade are, on the whole, satisfactory, but there is scarcely that amount of activity prevailing which we have latterly had to notice; most houses, considering the commencement of the quarter, have a fair amount of orders on hand. The position of the money market and the state of American affairs are materially checking the export trade. In Lancashire, owing to an improvement in the cotton trade, there is an increased demand for coal. The machinists are exceedingly busy, and such is the pressure on the locomotive firms by the railway companies that in many cases premiums would be given for early completion of orders. Prices are now quoted as follows:—Bars, 8*l.* 10s.; hoops, 9*l.* 10s.; and Welsh bars from 7*l.* to 7*l.* 15s. at the works. In the Middlesbro' district, pig-iron is quoted at 1s. lower, owing to the decline in Scotch pigs. The stocks are very low. The Coal Trade continues active, and the demand for the London market is still improving. The strike in South Staffordshire is causing an increased demand in Derbyshire, Yorkshire, and North and South Wales, but the increase in the cost of transit is such—varying from 2s. 6d. to 5s. per ton—that it cannot be expected that such a trade will continue after the strike is ended. The Staveley Coal and Iron Company have succeeded in purchasing the coal under the estate of the Duke of Portland, in the neighbourhood of Barlow, and Mr. Senior, managing director of the Chesterfield and Midland Silkstone Company, has purchased the Hasland Lane Colliery on very favourable terms. The Metal Trades at Sheffield are reported to be healthy, and the increasing demand for manufactured goods indicates the state of trade generally to be in a healthy condition.

The Government Commissioners, in their newly-issued report, say—"The lead mines in Derbyshire were extensively worked by the Romans, and from that period till the present the principal portion of the lead-producing district has been subject to mining "Customs," confirmed and consolidated by Acts of Parliament. In the "Customary" manors ores of lead are worked by anyone who choses to search for them, subject to the payment of a portion of the ore obtained, either to the Duchy of Lancaster or to the proprietor. The existence of these customs has encouraged a system of unmethodical workings, conducted by the owners of small mines, whose profits or earnings are, of course, subject to violent fluctuations. About 20 years ago expensive machinery was erected at several places, but the mines proving unproductive much of it has been removed. As compared with many districts the workings have not generally been deep, 130 fms. is, perhaps, the extreme depth to which they have been carried; not many exceed 100 fms., and, probably, but few men at present are employed below 80 fms., and the greater number at lesser depths. Access to the mines is usually by ladders or stemples, though several important adits still exist. The rock is for the most part carboniferous limestone."

The coal and ironmasters of North Derbyshire have, with the aid of their wives and lady friends, succeeded this week in raising a large sum of money, estimated at 1500*l.*, in support of the funds of the North Derbyshire Hospital, the only institution, except that at Derby, adapted especially to alleviate those who may be injured by mining operations. The most successful contributor to the bazaar pecuniarily is the lady of Mr. W. Fowler, of the Sheepbridge Ironworks. This lady collected from her friends in specie 158 sovereigns of the present year's coinage, and the proceeds of the sales from her stall are calculated to realise more than that amount. Mr. Abrahams, the eminent dealer in articles of vertu, in London, contributed through Mr. Barrow, Chairman of the Staveley Coal and Iron Company, a beautiful set of tea service, valued at 60 guineas, which Mr. Barrow himself purchased for his own mansion. The service formerly belonged to the Countess of Blessington. There was a vast quantity of valuable articles, and the bazaar is accounted the most splendid which has ever been held in Derbyshire. On Friday evening there was a grand ball held in aid of the hospital, which it was anticipated would yield over 100*l.*

Much speculation is rife as to the object which the Staveley Coal and Iron Company have in view by raising their capital from 600,000*l.* to 900,000*l.* It is asserted by some that they intend to put down forges, and to enter more fully into the manufacture of iron than has yet been done at Staveley, and this would seem to be the most probable purpose for which most of the additional capital is required.

A very interesting incident occurred on Tuesday, at the anniversary of the Clay Cross

Institute, which is supported by the proprietors and miners at Clay Cross. Mr. Binns occupied the post of Chairman, and during the evening the health of Mr. Hedley, the late Inspector of Mines, was proposed, in which feeling allusion was made to the regret which was experienced by the whole of the mining population of Derbyshire at the loss of Mr. Hedley's official services, and the esteem in which he was held by the working men generally. Mr. Hedley appropriately replied, stating that he looked upon every man as a brother, add when he found a man in trouble he always endeavoured to help him out of it.

The applications for Letters Patent include—Mr. L. J. Crossley, of Halifax, for improvements in electric telegraphs; Mr. J. H. Brierley, of Beech Hill Mills, Halifax, for an improvement in ladies' waist buckles; Messrs. E. Robinson, G. Washington, and G. Smith, of Bradford, for improvements in machinery or apparatus for drying or desiccating materials or substances containing moisture, part of which is also applicable to boiling liquids; Mr. H. Mason, of Bradford, for an invention of "improvements in cap or tube frames employed in spinning and twisting fibrous substances; Mr. T. Parkins, of Robert Town, near Normanton, for improvements in apparatus used in the manufacture of prussiates of potash; Mr. E. Allen, of Radcliffe Hall, for improvements in driving bands and chains, and in the method of piecing, connecting, or repairing the same; Mr. T. Kenyon, of Miles Platting, for improvements in preparing, fixing, and mordanting cloths and yarns; Mr. A. Jackson, of Aynscomb House, Orpington, for improvements in constructing and arming ships and other vessels or floating bodies; Mr. J. G. Beckton, of Whitby, for improvements in heating retort and other ovens for the distillation of shale, coal, and other substances.

REPORT FROM NORTHUMBERLAND AND DURHAM.

Oct. 20.—The demand for coal continues extremely good; indeed, there are plenty of ships in the Tyne waiting for cargoes of Hartley steam coal, the only difficulty lately having been in getting a sufficient quantity taken along the various railways to supply the great demand. The demand for most descriptions of coal and coke also continues good. The Wylam Colliery and Ironworks were offered for sale, or to be let, in Newcastle, a few days ago, but failed in getting an offer for either. This appears at first sight most remarkable, considering the state of the iron and coal trades; and at Wylam it is well known that a first-class house coal has been produced for a very long period—we suspect for almost a century, as it is one of the oldest collieries in the district, and the seams are certainly not yet exhausted. A most excellent fire-clay is also found in great abundance on the estate, which can be cheaply worked. The situation of the ironworks also is good; it can, indeed, hardly be surpassed. Perhaps the reason for the neglect with which the property has been treated hitherto by capitalists may be found in this—that some difficulty has been met with lately from water getting into the mine; but this, it is understood, is only a temporary difficulty, which can easily be remedied. It is also worthy of notice that the property has been injured in value by the proceedings and statements of the owner before the Assessment Committee. At the meeting of the Newcastle Town Council, held yesterday, the important subject of the Low Lights Dock came up for settlement—that is, the proposed guarantee by the Council of 25,000*l.* towards the formation of the dock. Much opposition was offered to this course, which was recommended by a committee; but ultimately the motion for the adoption of the report was carried by a considerable majority. A large portion of the money required for the formation of this dock is, therefore, guaranteed; the Blyth and Tyne Railway Company having guaranteed 50,000*l.*; the landowners, 50,000*l.*; the Corporation of Tynemouth, 50,000*l.*; some of the steam coal'collieries, 50,000*l.*; Tyne Improvement Commissioners, 50,000*l.*; and the Newcastle Town Council, 25,000*l.*: making a total of 275,000*l.* in all, so that there is now no obstacle to the formation of the dock, and it is expected that early in the ensuing spring it will be vigorously proceeded with.

REPORT FROM MONMOUTH AND SOUTH WALES.

Oct. 20.—The dearness of money, and the extreme depression which prevails in financial circles, are having some effect on the Iron Trade, although it must be admitted not to anything like the extent to what is the case in other trades. The exports not only to the States, but to other foreign markets as well, have fallen off, in consequence of the unsettled state of monetary matters, and until the rate of discount is reduced to a moderate level uneasiness will continue to prevail, and buyers will wait to the utmost before giving out their specifications. At present Monmouthshire and South Wales makers are unquestionably well placed for orders, and they are able to afford the thousands of hands in their employ full and regular employment. Had not, however, such a large number of furnaces been out of blast in Staffordshire, and so many mills working short time, it is evident that the orders in the market would not be sufficient to support the current quotations. The most sanguine members of the trade concur in this view, and although for the time being prosperity reigns in this district, yet the future prospects are not of so decidedly encouraging a character. No doubt the turn that matters may take in America, the rate of discount, and many other causes, will have their influence on the trade, but, taking the most favourable view of things, it is generally believed that no advance in quotations need be looked for; while, on the other hand, there is no such confidence felt that a reduction will not have to be submitted to. The same remarks apply, and perhaps to a greater extent, to the Tin-Plate Trade, with this exception, that it cannot be in a much more depressed condition than it is at present. Activity is to be witnessed on all sides in the Coal Trade, and a larger quantity of coal is raised in the district than ever was known. Both the home and foreign demand is good, more especially the former, and there is no lack of orders in the market.

The Government Commissioners, in their report, say—"The mines in South Wales are situated for the most part in the lower Silurian and Cambrian rocks; the method of working assimilates to that practised in Cornwall. The access is usually by ladders, though in some cases by adit levels. Dr. Smith analysed eight samples of air removed from mines in this district, and that of the whole number not one could be regarded as pure or normal, one only was simply impure, and the remaining seven were decidedly bad, results indicating that the ventilation of these mines is more defective than any of those which have previously been named by the Commission. The least amount of oxygen contained in any of the samples was 19·72 per cent., and the largest of carbonic acid 1·74 per cent. The causes and nature of accidents are much the same in this locality as elsewhere, except that boilers are better provided with safety apparatus. Changing-houses are rare, but where they are provided some of the miners make use of them, though it was stated by several witnesses that in consequence of living near to the mines the men preferred walking home in their underground clothes. The dwellings of the miners are damp and ill ventilated, with mud floors, fixed windows, and roofs not watertight. There is seldom more than one room, and that is generally over-crowded. The nonpayment of wages in some instances, and irregularity in many, were made subjects of complant by miners working in some of the small mines in the districts of Aberystwith. Lists were handed in showing considerable arrears due to the miners."

The South Wales, Forest of Dean, London, and Southampton Direct Railway.—There is now before the companies interested one of the most important railway schemes which has been proposed for many years. Without being a competitor with any existing line, it is planned to save 38 miles over the shortest narrow-gauge route, and more than 60 miles over the broad-gauge route between the Welsh steam coal fields and London. It would also save about 66 miles over the narrow-gauge route, and about 90 miles over the broad-gauge route from these coal fields to Southampton and Portsmouth, and 43 miles to Bristol.

The Slate Quarries of Pembrokeshire.—There are several rather valuable veins of slate in the northern districts of Pembrokeshire, and some twenty or thirty years ago the extensive quarries on the breast of the Preselly Mountains, near Maenclochog, were worked, and an enormous capital was sunk there. These quarries, either from want of capital, bad management, or some other cause, have ceased working for a number of years, until a short time since they were again started by a London company, and a good many hands are now employed. The same company have taken, or are in treaty for commencing to work, other quarries in the same county, including Llangolman, Llandilo, Twrch, &c. The extraordinary demand for slates has, no doubt, been the chief inducement in taking these quarries, and it is to be hoped that they will turn out profitable to the enterprising speculators.

Death of Mr. Henry Bath.—It is with unfeigned regret that we have to announce the death of Mr. Henry Bath, of Longlands, Swansea, which took place on Friday morning last, at Falmouth. Deceased was the principal in the well-known firm of Henry Bath and Sons, copper ore merchants, Swansea, and for something like half a century he was actively engaged in the trade of the district. Both in his private and public character Mr. Bath was deservedly respected, and as a merchant his name stood among the highest for the probity and honour which characterised his business transactions. He was a warm supporter of religious and benevolent institutions, no matter of what creed or sect, so long as the object was good, and it would be no exaggeration to say that he was universally respected in Swansea and the neighbourhood. Deceased was in his seventy-eighth year.

In view of the increased development of the iron, coal, and other minerals of South Wales and Monmouthshire, the capitalists and large landed proprietors are not behind hand in making the necessary arrangements to increase the floating accommodation at the different ports, and thus prepare for the reception of the expected increased trade. The trustees of the Marquis of Bute have determined to renew their application this next session for powers to construct an other dock and a low-water pier. The objections raised to the scheme last session hav been avoided, and the bill will be confined to the Marquis's own property, with the exception of the pier. The Llanelly Harbour Commissioners are improving the harbour, and at Newport the Dock Company are erecting additional hydraulic machinary for loading and discharging vessels. It is also in contemplation to construct docks on both sides of the river at Newport, and in conjunction with the east dock there is to be a new line of railway to Pontypool-road. These are unmistakeable indications of progress.

A few days since Mr. Taylor, the manager of the Cadoxton Colliery, and three men, narrowly escaped suffocation through inhaling noxious gas. It appears that they entered the colliery at an early hour in the morning, and about six o'clock the engineer found them in the air-way, lying on the ground insensible. Medical assistance was immediately procured, and after the usual remedies had been applied consciousness was again restored, and the four soon recovered. The gas, it is believed, escaped during the previous night.—The colliers have turned out at the Tillery pit, the property of Messrs. Bevan and Co., in consequence of a disagreement as to the discharge of eight men. Attempts have been made to settle the dispute, but without success, and several of the men are to be brought before the Tredegar magistrates to-morrow for leaving their work without giving the requisite notice.

Messrs. Dickson and Barnes, the eminent contractors, have purchased the Oystermouth Railway from Mr. G. B. Morris, the present owner, of which they intend to avail themselves immediately to extend the line to the Mumbles Head. The public, I believe, have Mr. Barnes to thank, in a great measure, for the arrangement.

The arrivals at Swansea include:—The Mary Ann Johnston, from Paposo, with 550 tons of copper ore, for H. Bath and Sons; the Abielle from Cherbourg, with 66 tons of iron ore, for the Dowlais Iron Company; the Herzog Bogislar, from Alicante, with 186 tons of silver ore, for Dillwyn and Co.; the Simon from Hondekilp, with 275 tons copper ore, for James Taylor and Co.; the Law Ogilby from Coquimbo, with 180 tons of unwrought copper, and 180 tons of copper ore, for Charles Lambert and Co.; and the Hermino from Aveiro, with 175 tons of copper ore, for Richardson and Co.

NOTES ON LECTURES BY Dr. PERCY AT THE ROYAL SCHOOL OF MINES.

Of all the physical properties peculiar to metals, there is none more remarkable than that of their opacity. To this rule there is only one known exception, and that is gold, which, when rolled into leaf, admits of the passage of light of a greenish tint. Prof. Faraday has most satisfactorily proved that the light in this case does not pass through pores in the metals, but actually through the gold itself. Lustre is highly characteristic of metals, and depends on the state of the surface of the metal. Colour is a character by which many metals may be distinguished. We may divide metallic colours into five classes. In the first place we have white metals, at the head of which list stands silver, and we may subdivide these white metals as follows:—First, we have silver white, as silver; next, white inclining to silver white, as tin and cadmium; then, white inclining to blue, as antimony, zinc, and lead; and, lastly, yellowish white, as bismuth. After the white come the grey metals, of which class pig-iron is a good example. Thirdly, we have yellow metals, as gold, the alloys of copper and zinc, and of copper and aluminium; this last is peculiarly similar to gold in colour. Fourthly, we have red metals, such as copper, with which in colour the only body that can be confounded is the cyanide of titanium. Fifthly, and lastly, we have one violet-coloured metal, which is an alloy of copper and antimony, called regulus of Venus by the old alchemists; its colour is not the result of tarnish. The alloy is commercially worthless. So far, then, for the general properties and characters of metals. We must now pass on to the general consideration of metallic processes. But we must, before entering on this branch of our subject, lay down certain definitions of words we must constantly employ. In the first place, what is an ore? We may define it as metallic matter in the state in which it is extracted from the earth by the miner. Metals occur in nature, in the metallic state, or in various states of chemical combination. Thus, with sulphur as sulphides, with oxygen as oxides, &c. Native metals are not necessarily pure—for example, gold is never found in nature quite pure, being always mixed with a sensible quantity of silver. Ore exists in nature either in veins or in beds. These veins are filled with metallic and non-metallic matter, and to the latter the term vein stuff is applied. Sometimes veins enlarge into pockets, which the French term *amas*. Now, in extracting metallic matter from veins it may be necessary to remove the worthless stuff with it; and so, also, where ore occurs in beds or strata, it is all but impossible to remove the metal without some of the roof or floor. We will here adopt the term extraneous matter to everything in ore except the metallic mineral species of which the miner is in search. This extraneous matter is removed by dressing: in some cases the whole of it must be removed; in others, as in copper ores, it is advantageous to leave behind a certain amount of silica, which assists in the after smelting to separate the iron from the ore. Extraneous matter may consist of a variety of bodies, such as silica, in the form of quartz, hornblendes, clay-slates, lime, sulphate of barytes, fluor-spar, &c.

With regard to metallurgical processes, they may be divided into dry and wet methods, according as the agency of fire or liquids is employed. In some operations we may employ both, and resort first to the agency of fire and then to that of liquids. It is not always that metals are extracted in the metallic state from the ores; for example, cobalt is never extracted as a metal. We may classify metallic processes generally in the following rough manner:—First we have separation of metals without fusion of the ore, and this class we may subdivide into direct separation without reduction, as in the case of extracting gold from gold quartz, and indirect separation with reduction, as in the Mexican silver amalgamation process. Secondly, we have separation of metals with fusion of the ore, and this we may subdivide into simple fusion, simple reduction with fusion, and reduction with volatilisation. Of the term reduction, when a metal is separated from a state of combination into a metallic state it is said to be reduced, and the agent whereby this is effected is called the reducing agent. For example, when we fuse sulphide of lead and iron together we get metallic lead separated, and sulphide of iron produced. The lead is here said to be reduced, and the iron is the reducing agent. Reduction is also used to express partial elimination of the electro-negative element. Those metals affected by heat alone are known as the noble metals. We shall find when oxides and sulphides are mixed together and heated that perfect reduction takes place, the metal being eliminated. In this case they react on one another. Of reduction by means of carbon we must notice that when an oxide is thus reduced, and it is easily reducable, carbonic acid is the resultant; but when the oxide is not easily reducible carbonic oxide is formed. The chemist Le Play long maintained that in all cases of reduction carbonic oxide was the reducing power, but we have satisfactorily proved that reduction takes place in some cases at a temperature far below that at which carbonic oxide could be formed. We have, moreover, certain oxides which we cannot reduce by the agency of carbonic oxide, but which are readily reduced by carbon.

Now of the term smelting. The verb smelt is undoubtedly derived from the German verb "smeltzen," to melt. We use the term as applied to processes, or series of processes, by which a metal, or metallic compound, is separated by fusion from its ores on a large scale. The terms flux and slag we can best explain by an example. Gold quartz is not reducible alone in our hotest furnaces, and we cannot separate the gold thus from quartz. If, now, we add to the gold quartz some soda, and apply heat, a glass is produced, and a button of gold. In this case the carbonate of soda is the flux, and the product, the combination of the soda and the silica, is termed the slag. The nature of the flux must vary with the nature of the extraneous matter in the ore.

Of the term regulus, the old alchemists used it in a different sense to what we do; we must, therefore, define its meaning. In acting on certain copper ores we separate the metal first as a compound of sulphide of copper and iron. If we have taken an ore composed of copper, sulphur, iron, and silica, &c., and exposed it to such a temperature as will melt it, we have formed slag and regulus. The term regulus is applied to all such compounds, and is essentially a sulphuretted compound of the metal obtained by fusion of its ores. In operating on certain metals we prefer to obtain them in combination with arsenic, as arsenide, compounds analogous to the sulphuretted compounds termed regulus. The word roasting is generally used synonymously with that of calcination, although they ought not to be confounded. The object of roasting is different with different metals. We may roast to expel volatile metals, or roast to expel certain matters by aid of air as well as heat, or it may be we roast simply to oxidise. Roasting is effected metallurgically in a very rough manner, and generally in heaps, where the ore is piled on a stratum of fuel. Sometimes roasting is effected in kilns similar to lime kilns, also in furnaces, as in the case of roasting copper ores. When we roast an ore of copper, as copper pyrites, and the sulphur is expelled as completely as possible, and no further evolution of sulphur takes place, the ore is said to be roasted sweet, or dead.

Distillation is resorted to in the treatment of certain ores where the metal is volatilised, and the vapour collected. The best example of this is the mode of treating zinc ores to obtain the zinc therefrom. Sublimation is a term applied to the volatilisation of metals, and their condensation in the solid form, as in the case of arsenic. Liquation is when an ore or metallic compound, consisting of two or more metals, differing much in fusibility, are separated one from the other by careful fusion. Thus a mixed mass of copper and lead, when heated in a furnace, will be completely separated, and the lead, melting at a far lower temperature than the copper, may be run off, and the copper left behind. Another illustration is the following:—Take ordinary sulphide of antimony, mixed with earthy matter, and heat such a pounded mass in a crucible, having a hole in its bottom, the antimony will melt, and flow through the bottom of the pot, leaving the earthy matter behind.

We now come to a subject of great importance in all metallurgical processes—slags. We shall find that silica plays an important part in these, and we must, therefore, consider them in detail. We may divide these slags (silicates) into two classes—those that contain water, the hydrated silicates; and those that do not contain water, the anhydrous silicates. Zeolites are an example of the former, and felspars of the latter class. The bases which are commonly characteristic of slags are lime, magnesia, oxide of iron, oxide of manganese, alumina, potash, and soda. Our knowledge of silicates is, unfortunately, somewhat unsatisfactory. We have neutral silicates, in which the oxygen of the acid is three times that of the base; and tribasic silicates, in which there are three equivalents of base and one of acid.

FOREIGN MINING AND METALLURGY.

We have several matters of interest to note in connection with Belgium. The utility of a line of railway directly uniting St. Ghislain and Frameries across the whole Couchant has been officially recognised. An application for a concession was made Aug. 23 by the Hainaut and Flanders, and the Haut and Bas Flenu has since come forward as a competitor, and has solicited the application of a preferential right in connection with the granting of a concession. The Government must consult, before every other consideration, the interests of coal mining industry, and of the important localities of the Borinage, which the projected line unites to the national network. It has to be considered whether the wants of commerce would be better and more completely served by the Haut and Bas Flenu Company, already in possession of a system of small industrial lines, than by the Hainaut and Flanders, which is proprietor of a great artery, uniting the coal basin to the principal centres of consumption. It is necessary to consult the real wishes of the parties interested, and the Hainaut and Flanders has applied to the Minister of Public Works to proceed with an enquiry, in accordance with existing legal arrangements. One of the greatest preoccupations just now of Belgian metallurgists is the indecisive position of the iron trade in England, as a diminution or otherwise in the English production would have a marked influence on Belgian industry. Since siderurgy has regained such a great activity in England, a proportionate development has led the Belgian works to export on a larger scale, and into new countries; in other words, some of the English outlets have passed into the possession of Belgian works, and at present Belgian industry finds itself more intimately united with that of England. Prices, however, remain stationary, notwithstanding the great activity in orders. Production continues on a great scale. The English contractors for railway lines in Mexico—Messrs. Smith, Knight, and Co. (Limited)—have put in adjudication an important contract for rails, and several Belgian works have submitted tenders, among others the house of De Dorlodot. Although it is not considered probable that the contract will be secured by a continental establishment, congratulations are expressed that Belgian industrials should enter into competition with English metallurgists in connection with an affair entirely British. Such a course is also in accordance with the desire of the Government, which has declared its intention to do all in its power to establish commercial relations between Belgium and Mexico. The upward tendency which has been remarked in refining-pig in the Liége group has been checked. With regard to the Belgian coal trade, we may observe that a Jeumont letter says:—"Shipments are suspended in the Charleroi district. The boatowners have asked for 8s. 10d. per ton, but at present nothing has been done at this latter price. At La Fère no fewer than 150 empty boats were recently lying, and the Meuse has also brought to Charleroi a considerable number of empty boats. At Mons it is also remarked that the course of freights has become excessively high, in consequence of a relatively abundant number of orders delivered to the coal-workers of this basin. It is also on this account, and because work becomes more active, that strikes have occurred."

The French iron trade has just entered into the second period of the treaties of commerce concluded with Belgium and England. The tariffs which still "protect" the metallurgical industry of France experienced, Oct. 1, a fresh reduction, the duty on pig having fallen from 1*l.* to 16s. per ton, and the duty on iron in bars from 2*l.* 16s. to 2*l.* 8s. per ton. Plates which paid 3*l.* 8s. and 3*l.* 16s. per ton now pay only 3*l.* per ton; the reduction on thin plates is 1*l.* 4s.; 16s. on steel in bars, and 1*l.* 12s. to 2*l.* on steel in plates. Thus is realised the first part of the Imperial programme; but the French ironmasters urge—and, as it appears to us, with a good deal of force—that another portion of the arrangements in the direction of compensations must be accomplished in its turn with the same punctuality, and that it is especially in the creation or improvement of means of transport that the Government must seek opportunities for assisting industry to support the strain to which it will find itself submitted by the putting in force of the tariff of October. If the State has not yet been able to execute all the works tending to the improvement of means of communication, and a reduction in the transport rates of raw material, it would be easy to take a measure which would prove of immediate benefit—the suppression of navigation dues. This is a measure earnestly solicited by industry and commerce. The St. Didier market has presented no appreciable change; nevertheless, the tone of business is good, the current of business is sufficiently strong to maintain activity in the works, and if prices do not advance no reduction need be anticipated. Charcoal-made pig is quoted 4*l.* 10s. to 4*l.* 12s.; mixed pig, 3*l.* 16s.; coke-made pig, 3*l.* 12s.; rolled iron, 9*l.*; hammered iron, 9*l.* to 10*l.* 16s.; and machine, No. 20, 9*l.* 4s. per ton. Advices from Longwy, in the Moselle, state that the most striking item of intelligence is the putting in train by the Hayange house of five furnaces, having a great production—two at Hayange, two at Moyeuvre, and one at Styring. A letter says:—"Many orders continue to be received in the Moselle for iron. A cordial understanding prevails in the camp of the triumvirate, so that prices remain always the same, or 8*l.* 8s. within the zone of the works. Prices for Paris are less firmly sustained, in consequence of the competition which the works of various groups sustain on that market. Competition comes particularly from the forges of the Nord, which are less favourably situated than those of the Moselle in respect to orders. Puddled iron continues to sell pretty well in the Moselle; it is considered, however, that this circumstance will result to the detriment rather than otherwise of metallurgical industry. Thus puddled iron from coke-made pig is generally purchased by houses which are accustomed to sell products of superior quality; and, in order to reduce the return prices, a portion of rough Moselle iron is introduced. The Eastern of France Railway Company has just established a station near the village of Mont St. Martin, and at a future period this station will be even more important than that of Longwy. The furnaces of MM. Labbé and Legendre are on the left of the new station, and the constructions of the Baron d'Adelsward are on the right. These furnaces are, then, admirably situated to produce economically, but it remains to be seen whether the future price of coke-made pig will be sufficiently remunerative to redeem the capital engaged. If the Marne district can produce coke-made pig at 3*l.* 8s. per ton, with small furnaces, this rate will be notably diminished when large furnaces have been established, and the outlet of Champagne, on which, perhaps, too much reliance has been placed, will be disputed by furnaces established on the spot. The majority of the general councils have occupied themselves with the promotion of departmental lines of railway. It was thought that the council-general of the Moselle would solicit, in the first instance, a rectification of the old Ardennes line, between Longuyon and Fontoy. When we examine the present route of the Ardennes line, we might truly say that the company appears to have done its utmost to avoid the localities which might furnish it with a regular traffic. Instead of establishing its line in a district containing almost inexhaustible mines of ironstone, it has preferred to traverse a district presenting no elements of transport. We regret that the council-general did not think fit to express an opinion on so desirable a rectification. It occupied itself, on the contrary, with departmental lines, the importance of which is doubtful, from an industrial point of view—such as a line from Pont-à-Mousson to Hernie, or one from Aumetz to Boulay. Nevertheless, in a district like ours industry must be regarded as standing before every other interest. It is especially a line accommodating Herserange, Moulaine, Haussigny, &c., that we wish to see supported. The company which would make a railway across these mineral districts would render itself exceedingly useful, and would be assured considerable profits—in fact, the line would be equal in value to that from Bessèges to Alais." The General Direction of Customs has just published tables, showing the trade of France with foreign countries during the first eight months of the current year. An error committed with regard to pig-iron renders it impossible for us to follow exactly the progress of the imports of that article. Thus, according to the tables of the Custom House officials, 132,000 tons of pig entered France in the first seven months of 1864, while in the first eight months of the year the importation of only 131,000 tons is noted. We shall see by the next publication whether the error applies to the tables of the eight months, or whether the last statement rectifies the figures previously published. Nevertheless, the error appears to refer to the totals previously published and brought down to July 31, while the statistics now published—and of which we gave a summary in the *Mining Journal* of last week—appear to be the real quantities imported up to August 31. Mention is made of the intention of the New General Company for Promoting Commerce and Industry in France to establish some great metallurgical works on the shores of the Lac de Berre, efforts to convert which into a vast port of refuge are being made by a canal, which will soon unite this salt lake to the Mediterranean.

Progress has just been reported to the shareholders in the Mousaia Mining Company, but it is no great progress after all. Thus a minute statement, read by M. Patron, interim manager, shows that the products obtained exceeded the expenses incurred in obtaining them by a bare 18*l.* This is an insignificant result, but, nevertheless, it presents a certain improvement in the position of this hitherto unfortunate enterprise. The earnings of the company amounted during the first eight months of this year to 1684*l.*, and the expenses to 1666*l.*, leaving the previously indicated profit of 18*l.* The extraction of mineral begins to yield good results. Thus with the exception of the month of August, when great heats occasioned sickness in the staff of the company—sickness which impeded the production—the other months of the exercise have progressed, and there is reason to hope that when the company has more ample resources at its disposal the extraction will be effected on a greater scale. The meeting named M. Patron definitive manager, and authorised him to sell the Caronte Works, subject to the approval of the council of surveillance, on certain conditions. The company carrying on the concern known as the Chantiers et Ateliers de l'Ocean will pay, Nov. 2, a dividend of 1*l.*, on account of the exercise of 1864.

Transactions in copper have presented some little animation at Paris, but the activity noticeable principally affects Chilian, the present price of which is fixed at 84*l.* 16s. per ton; English in plates makes 97*l.* 12s.; United States, Lake Superior, 102*l.* 8s.; and Corocoro mineral, 97*l.* 2s. At Havre, Chilian has fallen to 87*l.* and 86*l.* 10s. per ton; on these terms about 50 tons have recently changed hands; a lot of 3 tons of Minesota has made 104*l.* per ton. As a general rule United States copper is little sought after on this market; in the course of last month a lot comprising 22 tons of Quincy was the only affair dealt in; it changed hands at 102*l.* Other descriptions range from 96*l.* to 102*l.* The stock of United States copper at Havre at the end of September amounted to 226¼ tons, and the last advices from New York spoke of fresh deliveries to the amount of about 100 tons. The sales of Chilian at Havre in September amounted to 370 tons, and prices ranged from 89*l.* at three months, to 87*l.* account; the stock at the end of the month amounted to about 5600 tons. The Cologne market has been quiet, and transactions have been also limited at Berlin. At Hamburg affairs have presented very little importance; on the other hand, transactions being very limited, prices have maintained themselves pretty well. We should have noted that rather important arrivals are anticipated from Berlin, a circumstance which contributes materially to the improvement of the market. At Stettin there has been some demand. The demand for tin continues very restricted on most markets. Some sales of Banca took place at the commencement of the week at 61 fls., but at present purchases might be made below that price, and a lot of 700 blocks are mentioned, which has changed hands at 60½ fls. The Paris tin market has remained without animation

and prices have been almost nominal, Banca standing at 108*l.*, Detroit at 106*l.*, and English 109*l.* At Havre a lot of 50 tons of Detroit has been offered at 104*l.* per ton, but buyers have only presented themselves at 103*l.*, or 102*l.* 10*s.* per ton; the arrivals of the past month comprised 5020 saumons of Peruvian, and 3604 blocks of Banca and Detroit. Some purchases for consumption have been made at Hamburg at previously quoted rates. The Cologne market has been nominal, and at Berlin the article has remained without demand. Business in lead has been almost completely *nil* at Havre; during the past month consumption received 27,987 saumons purchased direct from abroad; the direct importations of Spain have ceased, that being the only source of supply subject since Oct. 1 to heavy Customs duties. There has been little business and no change in prices at Paris, rough French making 21*l.* 4*s.*, and rough Spanish 22*l.* 12*s.* per ton. At Rotterdam there has been little activity, and prices have remained without variation. At Hamburg the article only finds outlets by small lots to meet the requirements of consumption; prices have remained at their previous level. At Berlin the article has been a little more sought after, and at Stettin it has also been in demand. With regard to the zinc trade—upon which we may, possibly, have more to say next week—we may note that rough Silesian is quoted nominally at 25*l.* 8*s.*, and rolled at 28*l.* per ton at Paris. In consequence of the unfavourable advices received from other markets, prices have again displayed a drooping tendency at Hamburg, but affairs have, nevertheless, not become more active. The Breslau market is also more feeble.

FOREIGN MINES.

NORWEGIAN COPPER COMPANY.—Capt. Holman, the manager of this company, writes under date Oct. 14, as follows:—I am happy to inform you that I have at last got the documents for the new grants, and I took them down at once to Mr. Hutchinson for his inspection, and begged him to write the company immediately to say that he had seen them; these, with the ore you have, will secure ground enough to employ 1000 men for hundreds of years. With regard to the attle heaps, I have gone over them again, and broke hundreds of stones, and there was scarcely one of them but what contained good copper ore; they can be returned for 10*s.* in 1*l.* tribute. The new lode mentioned in my last is still looking well, producing good stones of lead ore. I have sent the stones (intended to have been sent to London) to Kongsberg to be assayed for silver. We have sunk 5 feet in one place and over 2 feet in three other places on this lode. There is lead in every pit, and ground rather hard. At Dahlemyr we are driving west on the lode, which in this place is about 8 feet wide, producing good stones of yellow copper ore. In clearing away the rubbish we have found some stuff which I consider to be cobalt; some of the stones I have also sent to Kongsberg to be assayed for that metal, and shall be glad to inform you that it is cobalt.

ALTEN AND QUÆNANGEN.—Chas. Trelease, Sept. 9 to 25: Quænangen: The stope below the 10, on lode E, looks promising, the lode being 4 ft. wide, yielding 2½ tons of ore per fathom, and in the west end it now shows a well-defined appearance, having been for some time past rather disordered. The pitches in the 20 working continue to yield remunerative returns. In the adit stope east the lode is 2 ft. wide, worth about 2 tons of ore per fathom. At C mine we are at present only tributing, the tut-workmen being required to work on the recent discoveries at surface. The pitch on the back of C lode looks well, and yields from 3 to 4 tons of ore per fm. Cedar's lode (which we propose to name the late discovery, at the express desire of Mr. S. Kjelsberg, the discoverer) continues to exhibit the same splendid prospects undiminished; not much more of the overburthen has been removed since our last, the operations being chiefly confined to quarrying that already uncovered. Several floors and heads are being met with traversing the orey mass at various angles, but as yet we see no signs whatever of the greenstone or walls at any point, all being composed of orey work, yielding on an average upwards of 7 per cent. As mentioned in our last, the deepest point (about 7 ft.) shows the richest ore. An open cutting, about 40 fms. long, is completed, and drained about 9 ft. of the back, so that we expect to be able to get on for some time without being much inconvenienced by the water which flows freely from the bottom. The other discovery alluded to in my last is situate about ¾ of an English mile to the south-east of Cedar's Mine; this lode is laid open for about 5 fathoms in length, showing a very fine back, being composed of yellow ore, gossan, and the uppermost portions contain large proportions of the carbonates of copper; its width varies from 1½ to 3 ft., yielding fully 3 tons of ore per fathom; this lode is advantageously situated on the summit of a small mountain, and of itself is a good discovery—in fact, its appearance at the surface or back is superior to that of Cedar's, the ores, &c., being far richer; but if an opinion may be ventured, I should say that Cedar's will prove the most permanent, whilst the latter (which will be known hereafter as Magnus's lode, vein, mine, &c.) will likely be of a more bunchy character. On the whole, this lode shows a highly flattering appearance, and the surrounding surface shows mineral indications in great abundance; indeed, another small lode, a little further east, is now being profitably wrought on tribute. On Tuesday last I spent all the day, accompanied by Messrs. Wilson, Borchgrewink, and the resident agents, at the new discoveries, and examining the surrounding locality, when the unanimous opinion was that here, in addition to your former possessions, you have a very valuable mining field.—Raipas: The ore in the shallow adit foot stope has latterly been much disseminated, and of lower quality than usual. The south-west working looks tolerably well, where the lode is 2½ ft. wide, yielding 2 tons of good orey work per fathom. There is no change to note in the 20, where the vein of purple ore continues about the same size. The 30 is nearly dry, and we hope next week to resume driving the cross-cut south-easterly.—Old Mine: In the 5 north the lode continues fully 1 fathom wide, but during the past month has been poor for ore; it is, however, presenting more favourable signs again, and shows some good stones of ore intermixed. There is no change to note in the workings above the 5, and below the same level the stopes look rather better, where the lode is from 6 to 8 ft. wide, worth in places fully 3½ tons of ore per fathom. We continue to break good paying work from the side of No. 1 working, where there still remains a good large piece to take away. There is no alteration in any of the other workings worthy of remark since my last. The water and hard ground greatly impede our progress in Carr's rise and the winze against, but these places are now very near, and the holing is only a question of a week or two. Had the ground continued as it was on the top part of the winze it would have been accomplished ere this. The stope at Ward's turns out about 2 tons of ore per fm., and the lode continues tolerably regular in size. The pitches at Woodfall's are, on the whole, yielding remunerative returns. Our general prospects are again more cheering, and the returns for September will be upwards of 13 tons of copper.

SILVER MINING COMPANY OF NORWAY.—J. H. Rordam, Oct. 11: I inspected the mines yesterday, and found the situation in South Ramsrud more favourable than at the time I left for England.

LINARES.—Pozo Ancho Mine, Oct. 8: West of Taylor's Engine-shaft—South Lode: The lode in the 110, west of No. 138 winze, is very wide, consisting chiefly of calcareous spar and spots of lead. The 95, west of No. 136 winze, is passing through the first part of the cross-course. The men in the 61, west of Santana's winze, are squaring in the bottom of the level, to cause the water to run towards Crosby's shaft; the lode is worth 4 tons per fathom. In the 51, west of Crosby's shaft, the lode is small and disarranged.—East of Engine-shaft: In the 110, east of engine-shaft, the lode is very small, and the ground excessively hard. The lode in the 96, east of No. 135 winze, is improving, and produces good stones of ore, worth 1 ton per fm. In the 85, east of No. 134 winze, the lode is large, chiefly composed of carbonate of lime and stones of lead. The lode in the 75, east of cross-cut, is again improving; and, judging from the character of the 65, we expect it to open good ground from the present point home to the boundary.—North Lode: In the 85, east of No. 132 winze, the lode is very wide, and spotted throughout with lead, worth 1 ton per fm.—Shafts and Winzes: At Crosby's engine-shaft we have increased the number of hands, and we expect they will make good measurements this month. The ground in No. 143 winze is moderately easy for sinking, and the lode spotted with lead. The lode in No. 145 winze is large, containing some good stones of lead.

FORTUNA.—Oct. 8: Canada Incosa—West of Taylor's Engine-shaft: In the 100, west of O'Shea's shaft, the lode is large, and spotted with lead. We have the lode in the 90, west of Zamora's winze, and it contains decomposed granite, gossan, and small stones of ore. The lode in the 80, west of Henty's shaft, is compact and firm, and opening out very good tribute ground, worth 1½ ton per fm. In the 70, west of Judd's shaft, the lode is very productive, and of a promising appearance.—East of Engine-shaft: The lode in the 70, west of Lowndes's shaft, has been very changeable of late, but is again improving. The 70, east of same shaft, has rather declined in value since our last, and the ground is getting harder for driving. The lode in the 45, east of San Jose shaft, continues small and unproductive. In the 30, east of Garcia's winze, the lode is improving in appearance, and yields occasional stones of ore.—Shafts and Winzes: Tomas's shaft will reach the required depth for the 30 this month. The lode at Henty's shaft has a very kindly appearance, and, having cut the lode in the 90, we hope the water will drain through. The ground in Damian's winze is very wet and troublesome for sinking. Lopes's winze will be communicated with the 80 this month. Grande's winze is going down in a very productive piece of ground, worth 1¼ ton per fm. The lode in Geronа's winze yields occasional lumps of lead.—Los Salidos Mine: In the 90, west of Andre's winze, the elvan is very hard for driving. The ground in the 75, west of Sanches's winze, is still very unsettled. The 65, west of Buenos Amigos shaft, is now opening out a fine piece of ground, worth 2 tons per fathom, with the prospects of a good run of lead before it. The lode in the 55, west of San Carlos shaft, is small and compact, worth 1¼ ton per fm.—East of Engine-shaft: The lode in the 90, east of Morris's shaft, contains stones of lead, but not enough to value. We have resumed the driving of the 75, east of Delgada's winze, and hope soon to reach the lead ground at Cologan's shaft, to which it is approaching. The 65, east of Viciana's winze, although not so rich as formerly, is opening out a valuable piece of ground, worth 2½ tons per fm.—Shafts and Winzes: At Cologan's shaft the men are making good progress, and it will be got down to the 75 this month. Saez's winze is holed to the 65. The ground in Giminez' winze is rather hard for sinking, and the lode small. Castillo's winze is situated on the west side of the elvan course, and in advance of the 90.—General Remarks: The tribute department in both mines is looking much as usual. We estimate the raising for October at 300 tons.

ALAMILLOS.—Oct. 8: The lode in the third level, east of San Rafael's engine-shaft, is open and vughy, containing spots of lead. In the third level, east of San Martin's shaft, the lode is large, of a promising appearance, and worth 1 ton of ore per fathom. The lode in the second level, east of Taylor's, has declined in value. In the second level, west of same shaft, the lode has a kindly appearance, and we expect an improvement shortly. The second level, west of Madelena shaft, is opening a valuable piece of ground, especially in the back of the end, where the lode is wide and rich, worth 2 tons per fathom. The second level, east of same shaft, is also opening a valuable piece of ground, worth 2 tons per fathom. The lode in the first level, west of San Victor's shaft, is worth ½ ton per fathom. In the cross-cut north from San Juan shaft we have intersected the lode, which is small and unproductive.—Shafts and Winzes: The men at Taylor's engine-shaft are following up their work with great regularity. At San Rafael shaft the ground is easier for sinking, consequently very good progress is being made. Crosby's shaft is going down in a promising and productive lode, worth 2 tons per fathom. We have cut a plat, put in cistern, and fixed the lift at San Jose shaft, and will resume sinking in a few days. We have erected a good horse-whim at San Francisco shaft, consequently the clearing will be carried on with greater dispatch. The lode in San Eugenio shaft is small and poor. In Molero's winze the lode is improved, and the ground much easier for sinking. The water is getting quick and troublesome. Navarra's winze is situated east of San Adriano shaft, and, consequently, west of the second level driving west of Taylor's engine-shaft; it is in a very fine lode, worth 3 tons per fm., and will be got down by the time the level reaches it.

LUSITANIAN.—Oct. 10: Palhal Mine: There is a branch of ore in Taylor's shaft worth 2 tons per fathom. In Perez' shaft the lode is unproductive. The lode in the 80, east of Taylor's, is 1 ft. wide, composed of flookan and quartz. The same remarks will also apply to the 80, west of Taylor's. In the 70, east of River shaft, the lode is composed of quartz, flookan, and stones of ore. The branch of ore in the 70, west of Taylor's shaft, is worth ½ ton per fathom. The lode in the 60, west of Taylor's, is composed of flookan. The ground in the 60 cross-cut, north of River shaft, is of a hard gneiss. In the 50, west of slide lode, the lode produces good stones of ore. The lode in the 38, west of Perez' shaft, also yields stones of ore. In the 21, west of Perez' shaft, the lode is composed of flookan. The lode in the 8, west of same shaft, is composed of flookan, mixed with the country. The lode in the rise above the 38, west of Perez' shaft, is 1 ft. wide, yielding stones of ore. The lode in Fonseca's winze is 9 inches wide, but nothing in it to value.—Stopes: The stopes above the adit, west of Perez' shaft, are worth ¼ ton per fathom. The stopes above the 8, west of Perez' shaft, are worth 1 ton per fathom. The stopes above the 60, west of Joaquim's winze, are worth 1 ton per fathom. The stopes above the 60, east and west of River shaft, are worth 1¼ ton per fathom. The stopes above the 70, between Taylor and River shafts, are worth 1 ton per fathom. The stopes above the 70, west of Taylor's, are worth ¾ ton per fathom. The stopes above the 50, east and west of Norte's winze, are worth 2 tons per fathom. The stopes above the 80, east of Taylor's shaft, are worth 1¼ ton per fathom. The stopes above the 60, east and west of Jacinto's winze, are worth 1½ ton per fathom. The stopes above the 50, east and west of Machado's winze, are worth 1¼ ton per fm. In the 50, east of slide lode, the lode is composed of quartz and stones of ore. The stopes above the 38, between the caunter and slide lodes, are worth ½ ton per fathom. In the 50, west of Oak shaft, the lode is composed of quartz and spots of lead. The lode in the stopes above the 40, west of slide winze, is composed of quartz, with lead scattered throughout. The stope above the 30, west of Martinez' winze, is worth 1¼ ton per fathom, composed of a mixture of lead and copper. The ground in the 28, east of slide lode, is moderately easy for driving.—Carvalhal Mine: In the adit north-west, on the caunter lode, the lode is 2½ ft. wide, composed of quartz, mundic, and good spots of lead. We have commenced cutting down the incline shaft below the adit, and shall do what we can by drawing the water out with a tackle, as it is little to begin with.

PONTGIBAUD.—W. H. Rickard, Oct. 15: Roure: In the 80 metre level, south of Richards's shaft, we are still in crushed ground, very difficult for passing through. The 80, north of the same shaft, is in a kindly lode, yielding stones of ore. The 60 metre level south yields ¼ ton of ore per fathom. The 60, on Emily's lode, is unproductive. The 40, south of Agnes', on the main part of the lode, yields ½ ton of ore per fathom; the same level on the western part of the lode yields ¾ ton of ore per fm. The 20 metre level, south of the same shaft, is suspended to cross-cut under Virginie's shaft sinking below the adit level, which will take us about two months. The adit, south of Virginie's shaft, is poor; the same level south of the winze, on the western part of the lode, yields 1 ton of ore fathom. The stollen south, on the eastern part of the lode, has been idle since the beginning of the month for repairs in the level. The same level, on the western part of the lode, is set to drive by four men. Our stopes and tribute pitches throughout the mine yield tolerably well.—La Grange: The 40 metre level, south of Nosky's shaft, yields ¼ ton of ore per fathom; the same level, north of shaft, yields for the whole width of the lode 4 tons of ore per fathom. The 20 north yields a little saving work. The adit north is unproductive. The adit cross-cut, west from La Rancoule, advance favourably.—Mioche: In the 100 metre level, at Taylor's shaft, No. 3 lode in the rise produces stones of ore and blende. We have set to drive on No. 2 lode in the eastern cross-cut, where it yields good stones of ore; we hope to be able to see more of it in a day or two. There is no change in the adit cross-cut.—La Brousse: The shallow level, north of the little shaft, is suspended, being in too shallow ground to continue; the same level south is in a kindly lode, yielding barytes, thickly impregnated with green phosphate of lead. Basset's shaft is getting in stiffer ground; the sinking goes on well.—Pransi: The 70 metre level north, on Susan's lode, yields a little saving work. The 50 north, on the western part of the lode, is unproductive; the same level, on the eastern part of the lode, yields ¼ ton of ore per fathom. The 30, south of winze, yields ¼ ton of ore per fm. The 8 metre level north is hard and poor. There is no change in the 8 cross-cut west.—Surface: Our works generally have gone on well, the weather being fine. The walls of the engine and boiler-house at Nosky's shaft, at La Grange, will be up at the end of the month, and the boiler built in its place. Our dressing at Rosier has gone on well. At La Rancoule we have a slight supply of water.

ST. JOHN DEL REY MINING COMPANY.—The produce for the month of Aug. amounts to 26,127 oits., which is smaller than we had hoped to have obtained, owing to the unfortunate delay we have experienced in clearing the Bahu sump, and the prolonged occupation of Schneider's inclined plane in clearing operations in that locality. The gold return is, however, a little better than was extracted in July, both as regards the daily produce and also in the standard yield obtained from the mineral treated:—

	Oitavas.	Tons of stone.
The produce for July was.....	22,648	from 5233 = 5·130 oits. per ton.
" August	26,127	5047 = 6·121 oits. per ton.

It will be seen from these figures that the quantity of mineral reduced is less by about 206 tons than in July. This is owing to the diminished supply of water available during the past month. The standard yield is, however, an oitava per ton higher, and so far this is satisfactory. There has not been the supply of ore obtained from the East Bahu that was previously expected, owing to the circumstances above stated; but from the mineral available, and received from the mines, the produce may be considered as a fair return.

COST AND RESULT.—Produce for August ..	26,127 oits.	
Less loss in melting.....	157 oits.	
Nett produce	25,970 oits.	
At Rs. 3 $500 per oit. = Rs. 90,895, at exchange 2s. 3¼d.		£10,320 7 5
Cost for August is Rs. 90,160 $450, at exchange 2s. 3¼d.		10,236 19 4
Showing a profit on the month's working of.....		£ 83 8 1

Out of which 32*l.* 14*s.* 5*d.* has been expended on the Fernam Pass estate during the month of August. The cost is a little less than that for July, though the outlay in the mechanics department is rather above the average. Prices in provisions generally have been low. Our labour cost is less than during previous months, though the general outlay is not quite yet down to its normal amount. Although the profit is only nominal, it is better than having to record a loss on the working of the month.

DON PEDRO NORTH DEL REY.—Capt. T. Treloar reports that the gold return for August amounts to 1684 oits., being an increase of 101 oits. on the preceding month. The operations generally have progressed vigorously; every advantage has been taken of the fine weather, and a satisfactory amount of work has again been performed. The Morro de St. Anna Mines, which are yielding produce, are looking better, and the jacotinga formation at Maquine continues to promise great results eventually. Our exploratory works are advancing; and the improvements in Branco's Mine greatly strengthen our hopes that we shall have a good mine in the new ground south of Coelho's, Branco's, Sociedade, and Cornelius' Mines. Dawson's Mines, and the Mina de Agoa, therefore, are points of great interest. At Bawden's Mine the lode is less disordered, and its appearance indicates a return to its former condition. Branco's Mine has become very promising. The gold here, as in all the lodes of the Minas gold field, is concentrated about certain centres, called "shoots;" and at Morro St. Anna these shoots have been so rich that 300,000*l.* was netted by one man from one shoot alone. The produce from the Praia is so encouraging, that next year the works referred to in my report for June last will be resorted to for reaching the bottom of the deposit.

SANTA BARBARA GOLD.—Parl: Capt. Bryant, Sept. 14: Mine: There is no alteration to notice in the bottom of the mine; the lode continues about the same size, with the usual appearance. I am happy to inform you that we have succeeded in clearing out the bottoms southward, and secured a communication against the end of ground to No. 2 bottoms in the shallow level; it is now thoroughly cleared out, and well ventilated. A part of the bottoms was 2 ft. below the level; this extended for 11 fms. south from the arch, for which distance the bottoms measured 13 ft. wide, and from this point 9 fms. further south it narrowed gradually until in the end of ground it is 7 feet wide. In the last 9 fms. the ground was found to be rising, and is still standing, and against the end of ground is 16 ft. above the bottom of the adit level. On the 5th inst. we began to work fairly on the lode, and, from the first stone broken, we stamped 10 tons separate, and washed up the sand and cleaned the gold in batеas, which yielded 28½ oits. of gold = 2·85 oits. per ton of stone, to which may be added, at the least, 20 per cent., the difference between cleaning so small a quantity as 10 tons in batеas and amalgamating on a larger scale; so that I think we are within the mark if we say 2·85 oits. per ton, and add 20 per cent. = 3·42 oits. per ton. We are now working regularly on this night and day, with 10 pairs of borers in each corps, together 20 pairs; and, as far as I can judge, we shall be able to quarry stone much cheaper from this than from any other part of the mine. In the reduction department we have both stamps at present working on stone stamped up to date since Aug. 20—330 tons. The water has fallen off a little, so that we cannot dispatch quite so much stone as formerly, but showers may now be expected, which will give a sufficient supply of water. The gold will be cleared up after the 20th, so as to be forwarded on the 25th. I expect this quarter's produce will exceed that of the last.

ANGLO-BRAZILIAN.—Capt. Thomas Treloar reports that the produce for August amounts to 453 oitavas of gold. This he considers a most satisfactory return, and shows that an improvement must be taking place even in the shallow parts of the lodes they are working on. The development of the property is progressing, and the more the different parts of the mine are becoming known the great advantages for working, and the great advantages for good results are more apparent. At the deep adit 15 ft. 6 in. have been driven; if the ground had continued as favourable in the latter part as in the commencement of the month more speed would have been made. At the Barrel adit 16 ft. have been opened out, and some timber work put in to protect the workmen. At the Buraco Secco Mine the lode still presents most favourable indications. The stope for unwatering the sink is progressing; when this is in we may expect a much larger portion of stone from this mine. When Haymen's shaft holes to the Mina Grand, by means of a barrow-road, the stone from this mine will be conveyed to the shaft, and the present difficult and expensive mode of conveyance done away with. The upper lode is wider, and more charged with pyrities than when we commenced working. The workings at the Gongo Mine have also improved in appearance, and a line of "cato," or decomposed quartz and pyrites, has appeared near the footwall, which, by samples that have been bruised, yields fairly of gold.

CENTRAL AMERICAN.—Alotepeque, Aug. 31: In San Pantaleon Mine, the Guadalupe, or 50 fm. level, driving east of Cornubia engine-shaft, has reached the No. 2 cross-course, on which we have driven north 3½ varas towards the heaved portion of the lode; here the ground is favourable for driving. In the San Alfonso, or the 40 fm. level, driving west of Cornubia engine-shaft, we have about 38 fathoms to communicate with Taylor's shaft in the deep adit. The lode in San Alfonso level, driving east of No. 2 cross-course, is 2 feet wide, composed of flookan and calc-spar, with a small branch of ore, worth of the latter 4 cwts. of silver per vara, of fair quality. No. 1 winze, below San Felipe, and east of No. 2 cross-course, is communicated with San Alfonso level; this winze has been unproductive for the whole sink. The San Alfonso, or 40 fm. level, driving west of Taylor's engine-shaft, is hard for excavating, but we hope to hole this part of the deep adit level in two months more, if the ground should prove to be a little favourable. The lode in San Felipe level, driving east of No. 2 cross-course, is 2 feet wide, with spots of ore, but not to value. In the San Alfonso deep adit level, driving east towards Taylor's shaft, we have in the past month gone through No. 1 cross-course. We have a distance of about 20 fathoms more to drive to meet the level driving west from Taylor's shaft. The lode in No. 5 stope, below San Juan level, and west of No. 5 winze, has become poor, and is suspended. From this stope we have driven a cross-cut north and cut a branch, which proved to be unproductive. In the stope No. 10, below San Ricardo level, and east of No. 3 winze, the lode is worth 1 cwt. of ore per vara. The lode in the stope No. 12 is worth 3 cwts. of fair quality silver ore per vara, but we regret to say this is almost finished. The lode in Guerra's stope, above Dolores adit level, west of No. 2 cross-course, is worth 3 cwts. of fair quality silver ore per vara, but this is a small arch. The lode in the stopes east and west of Guerra's winze, is worth 2 cwts. of ore per vara. The lode in Wasley's stopes, above San Juan level, and west of Cornubia engine-shaft, is worth 2 cwts. of ore per vara. We have also driven a little cross-cut south from San Ricardo level, and intersected a flookan branch, but without mineral of value. The lode in the stope No. 3, above San Felipe, and west of No. 2 winze, is worth 1¼ cwt. per vara. A new slope below San Felipe level, and east of No. 2 cross-course, is worth 2 cwts. of ore per vara; our returns from this mine for August have been 43 tons 17 cwts., at an average assay of 65 ozs. of silver per ton. We deem it necessary to suspend our costeaning for the present, and drive San Felipe level east, and cut through No. 3 cross-course at this point, instead of driving San Ricardo level through No. 3 cross-course, being 10 fathoms deeper.—San Carlos Mine.—The lode in the Esperanza deep adit level, driving east of Esperanza cross-cut, is 2 ft. wide, composed of flookan, quartz, and mundic. In this level we have also driven west of the cross-cut, but have not found the lode to satisfaction, being in disordered ground. We now deem it necessary to drive a short cross-cut south into the foot of the western hill, to cut Carrera's lode, where the ground is more settled. We calculate to cut the lode here in from 8 to 10 fms. The lode in San Rafael adit level, driving east, is 1 ft. wide, composed of flookan, quartz, and a small branch of ore, worth 2 to 3 cwts. per vara of fair quality silver ore. In the stope in bottom of this level the lode is 2½ ft. wide, worth 4 cwts. of low-quality ore per vara. The lode in the stopes above San Rafael adit level is worth from 3 to 4 cwts. of ore per vara. We are putting an air-machine in this level, which will greatly facilitate the working of the back stopes and end. We are still clearing out the old adit level on Duarte's lode. We calculate to clean out this adit, and commence a winze below it, before the end of September. Our returns from this mine for August month have been 16 tons 13 cwts., at an average assay of 42½ ozs. of silver per ton of ore.—San Antonio Mine: In San Faustino level, driving east of the No. 1 cross-course, the lode is 18 in. wide, composed of flookan and quartz, with a little blende and mundic. An assay made of the best part of the lode gave 19¼ ozs. of silver per ton of ore; this end is suspended. The stopes also are suspended, in consequence of not giving silver sufficient per ton to send to the reduction-works. In San Ramon adit level, driving south in search of the lode, the present indications are such as would lead one to believe that we are nearing a lode, the ground being quite of another nature to what it was believed. The trial samples assayed from the different stopes in this mine are as follows:—29¼ ozs., 16¼ ozs., 29¼ ozs., and 19¼ ozs. of silver per ton. The returns from both the mines for August month have been 60 tons 10 cwts., at an average assay of 58·8 ozs. of silver per ton of ore.

Sept. 2.—The superintendent writes that little hope is held out of increased returns of ore in this and the coming month; that some points of great interest, however, were being vigorously prosecuted, which, on an improvement taking place, would augment the yield of ore considerably. The Alfonso end east, in San Pantaleon, has decidedly improved during the past week, and is now worth 4 cwts. of silver ore per vara. The driving of this level will be pushed on with all energy, and he trusts that by so doing some good ore ground will be opened out. The Guadalupe, or deepest level, having reached the No. 2 cross-course, is now being carried rapidly northwards to reach the lode.—San Carlos Mine: The deep adit Esperanza has been driven on the course of the lode eastward for 21¼ varas. The ground about the vein is not yet settled, nor is this level sufficiently advanced towards the position of the ore ground seen in the level above—circumstances which account for the unproductiveness of the lode up to the present time. In the shallow level (San Rafael) the ore branch continues in the end. The clearing of the old workings, on the south, or Duarte's lode, has discovered extensive superficial works, wrought, undoubtedly, with the view of stoping the ore ground, from the back of which a general sample of a small ore branch gave, per assay, 95 ozs. of silver. In the hacienda, he reports that from the smaller supply of ore it was probable the working in October would be limited to 4 barrels. The 24th conducta would be dispatched during the first week in October, and would consist of about 24 bars of silver, worth (approximately) $18,000.

WEST CANADA.—Wm. Plummer, Sept. 26: Huron Copper Bay: The new engine-shaft is progressing favourably. The lode, which we informed you had left the shaft by its underlie, has again made its appearance, and has improved the ground for sinking. The lode appears large, but we cannot say anything as to its value for some days yet. The lode in the 10 west is poor, and not so kindly-looking as it was some time ago. The stope below the 10, to the east of the new engine-shaft, is yielding 3 tons per fm., and the lode in the west of Palmer's 6 tons per fm. No change has taken place in the cross-cut north of Palmer's, except that the ground is more favourable. The stope below the 10, west of Palmer's, on the Fire lode, is yielding from 2½ to 3 tons per fm. The 30, west of Bray's, is poor; the lode is large, but not so orey as we expected to find it. The same level east has passed through the slide, and we shall have to cross-cut in order to find the lode again. The winze below the 20, east of Bray's, is yielding 3 tons, and the stope on the east of this 4 tons per fm.—Wellington Mine: The lode in the level going west of Grenfell's shaft is worth 2 tons per fm. The winze below the 20, west of Crase's, is worth 3 tons per fm., and is likely to continue at this rate. The stope on the east of Hooper's yields 3 tons per fm., and that on the west of Rowe's 1¼ ton per fm. The stope on the west of Knight's Fire lode is worth 2 tons per fm. The lode at Knight's shaft is poor. The horse of trap, which was before spoken of, has passed eastward for the whole length of shaft. The other stopes on the Fire lode are yielding on an average 2 tons per fm. The underground operations are going on well, and I do not see much change in the productiveness of the veins for some months past. On the surface we are pushing on as fast as we can get the parts from the foundry people, and we think it possible to get things closed up before the winter. We have had some heavy showers, but not enough to fill the dam; therefore, our dressing operations are not yet benefited by it.

THE AMERICAN SCHOOL OF MINES.—The immense value of the mineral deposits of the United States is so well known to Englishmen, that it has long been recognised by them that the judicious application of capital is all that is required to elevate the mineral industries of the country to that proud position of being first in contributing to the general wealth of the nation. Hitherto great inconvenience has arisen from the difficulty of obtaining reliable information from America as to the peculiar merits or disadvantages of any particular mineral property brought under the notice of English capitalists; there were no American engineers who especially devoted themselves to the subject, and English engineers, specially sent out, were necessarily unacquainted with the peculiarities of the districts reported upon. The difficulty will henceforth be removed; a well-constituted School of Mines, the first session of which will open on November 15, being now attached to Columbia College, New York, the principal chairs having been given to the most competent men that could be found, many of whom have honourably distinguished themselves at the Imperial School of Mines at Paris, and other schools of equal reputation. The standard of instruction will be as high as in any of the mining colleges of Europe, and the advantages which must thus accrue to the mineral interests of America can scarcely be over-estimated. It must be particularly gratifying to Englishmen to find that Columbia College should be first to found so important an institution as the American School of Mines, since that college must ever remain a connecting link between England and America. It was originally founded as King's College, New York, by George III., at the same time as the now celebrated University of Göttingen; and although some trifling internal dissensions for a time prevented Columbia College from attaining the distinction of its twin sister, it is to be hoped that impediments no longer exist to its onward progress, and that both as a school of mines and as a university, Columbia College will be known and respected throughout the world.

WEATHER PREDICTIONS.

SIR,—It is surprising what a storm of froth I can raise if I happen to mention the shortcomings of the Meteorological Department of the Board of Trade. I am informed by letters from some nameless persons that the winds of heaven are now a "vested interest," and only can be best governed from Parliament-street, and that the Board of Trade forecasts are of great utility to foreign countries. Well, let us see what these forecasts are worth at home. During the present month England has been visited by two very severe gales—from the 3d to the 6th, and on the 19th inst.; each of these gales were distinctly foretold in the Journal, but, strange to say, by a Government department which boasts of its extreme utility to our shipping interests, on the occurrence of the above gales not a single warning signal was sent to any of the home sea-ports. I beg pardon, after the gale of the 19th had been raging all night, unroofing houses, and causing serious disasters at sea, at 11 A.M. on the 20th, when the gale had nearly subsided, a telegram was gravely forwarded to, and actually received at, Lloyd's, Royal Exchange, *fifteen* hours after the gale had commenced, to "Hoist the drum." (Loud cheers.) It was also solemnly announced in the "weather reports" of the 20th, that cautionary signals were this day sent to the sea-ports, only 15 hours after the gale had commenced. These facts show that the weather forecasts of the Board of Trade are nothing more or less than expensive, useless, dangerous, and delusive shams. I suppose it does not matter much, so long as the 7000*l.* per annum can be got out of "public good." Certainly that great and beautiful meteorological discovery, "that pigs carrying straws in their mouths is an indication of rain," is alone amply worth 7000*l.* per annum of anybody's money, if only for giving the world this novel meteorological instrument.

With reference to the weather, the winds foretold in the Journal for the 13th and 14th occurred in the North Sea and the Baltic, and parts of Scotland. The winds foretold from the 16th to the 19th were generally felt over the United Kingdom. The winds for the 21st and 22d will be very strong, but of a local character. The wind already foretold from the 24th to the 26th will be strong, and the same for the 30th and 31st. A great deal of rain has fallen in various parts of the country since the 14th inst., with light frosts at intervals, as foretold in my last.

26, *Throgmorton-street, Oct.* 20. GEORGE SHEPHERD, C.E.,
Author of the "Climate of England."

MEDICAL OFFICER WANTED—DON PEDRO NORTH DEL REY GOLD MINING COMPANY (LIMITED).—The Directors of this company hereby give notice that they are PREPARED to RECEIVE APPLICATIONS from properly qualified persons for the SITUATION of RESIDENT MEDICAL OFFICER for the COMPANY'S MINES in BRAZIL.

Applications, accompanied by testimonials and references, must be forwarded through Dr. Williams, of Falmouth, late of Rio de Janeiro, from whom full particulars can be obtained. By order of the Board, JOHN E. DAWSON, Sec.

9, Liverpool-street, New Broad-street, London, E.C., October 21, 1864.

COLLIERY WANTED TO PURCHASE.—State exact situation, number of acres, extent of work done, give schedule of plant, thickness of seams, state rents and royalties, and price required; also, probable amount of working capital required.—Address, prepaid, to "Miner," City News Rooms, Cheapside, E.C.

WANTED, as PARTNER or OTHERWISE, a PERSON who can ADVANCE from FIVE to SIX HUNDRED POUNDS, to ENABLE a PARTY to DEVELOPE a PLAN for the REDUCTION of COPPER ORES, whereby a great saving will be realised, and large profits secured.—Full particulars will be given on application to Mr. W. F. RAWLE, patent and mining agent, 39, Bridge-street, Bristol.

THE BRITISH COPPER COMPANY.—TO THE SHAREHOLDERS.

Having frequently written the secretary of this company for information, without being able to obtain any reply, I thought it desirable to have a personal interview with the managing director; when I found that Lochfyne, to which so much value has been attached, has been totally abandoned, and that Rednal, from which, according to the last report, such large quantities of ore were to be raised, has proved worthless. With the mines thus unproductive, and the funds exhausted, it was deemed desirable that a meeting of the directors should be at once called, for the purpose of winding the company up. Shareholders would do well to make a personal examination of the company's affairs, and jointly act, so as to save themselves from further loss. To be forewarned is to be forearmed. A SHAREHOLDER.

ATLANTIC AND GREAT WESTERN RAILWAY COMPANY.

OFFICES,—2, OLD BROAD STREET, LONDON, E.C.

ISSUE OF SECOND MORTGAGE BONDS (OHIO DIVISION). PAYABLE IN LONDON.

$4,000,000. Due in 1883. Coupons due 1st January and 1st July.

Secured by a registered mortgage on the income and all corporate rights, privileges, lands, franchises, plant, and property of the Ohio division of the railway.

The bonds are redeemable at par in New York, or in London at 4s. 6d. per dollar, and are transferable without stamp or endorsement.

Interest coupons are attached to the bonds, payable semi-annually, at the Consolidated Bank in London, at the fixed rate of 4s. to the dollar.

The bonds will be issued at 66, at which rate bonds of $1000 will cost £148 10s., carrying coupons due January 1, 1865.

The coupons represent £14 per annum on each bond of $1000, or 9¼ per cent. interest on price of issue.

The immense development of the Western States of America, without any increase in the means of transit to the eastern ports, has given the Atlantic and Great Western Railway, as rapidly as the different sections have been opened, an unexampled success. The whole line is now fully ready for business and thoroughly ballasted, but the demand for rolling stock has been so far in excess of anticipation that adequate provision for it has not been made, and 200 miles of the main line has remained shut up till now. Great efforts have been made to supply locomotives, carriages, and trucks. The company has built extensive works for their construction, and are now turning out one locomotive complete every four days, and ten freight cars every day. In this way the demand will, in reasonable time, be supplied.

As the entire through traffic to and from New York will pass over the Erie Railway, it is but reasonable that that company, which will so largely benefit, should furnish a portion of the rolling stock, and to meet this a treaty has been made with the Erie directors for the expenditure of $5,000,000 in the construction of engines and cars. The entire amount is now under contract for rapid delivery, and as received will be used exclusively for the through traffic over the Atlantic and Great Western Railroad, the latter company on its part agreeing to supply a similar quantity for the same purpose.

Following the financial policy adopted at the outset, of issuing securities to the public only after so much of the line was finished as would secure the necessary income for providing the interest, the company feel justified, now that the building of this great railway is completed, in making this additional issue of bonds.

During the last ten years no railroad of any magnitude has been built on the American continent, except the Atlantic and Great Western, in which period the population and all produce, agricultural and mineral, have largely increased; hence results the prosperous state of most of the railroads, whose nett receipts have enabled large dividends to be paid to the stockholders, after providing interest on indebtedness, thus:—

The Cleveland, Columbus, and Cincinnatti Railway divided last year	15 per cent.
Cincinnatti, Hamilton, and Dayton.....	10 „
Little Miami.....	30 „
Michigan Central	18 „
Lake Shore, Cleveland, Painsville, and Ashtabula	23 „

And it cannot be doubted that the Atlantic and Great Western, possessing almost a monopoly of the petroleum traffic, and passing over the extensive coal fields of Ohio, which are of greater extent than even the large fields of Pennsylvania, will show results at least equal, and most probably exceeding some of those above named.

The whole system of this railway, when in operation, will consist of—

The Main Line—Salamanca to Dayton	385 miles.
Branch to Cleveland	67 „
Franklin Branch and Buffalo Extension	80 „
Total	532 miles.

Of this 332 miles have been successfully worked during the summer, for the last three months the earnings having exceeded $1,000,000. Estimating the receipts on the entire line to be only as great in proportion (and unquestionably they will be considerably larger) there would accrue—

A gross receipt of	$6,747,416
Deducting 50 per cent. working expenses.....	3,373,708
Leaving nett gain	$3,373,708
Interest on total bonded debt, including present issue.. $966,560	
Rent of leased lines 300,000	=1,266,560
Leaving surplus	$2,107,418

This, under ordinary circumstances, would be applicable to dividend on stock, but for the amount required to pay interest on bonds ($717,860 being payable in London, at the fixed rate of 4s. per dollar, and the rate of exchange at present ruling exceptionally high) a portion of the above surplus would be absorbed in the premium for gold.

It is thus evident that the resources of the road will be far more than equal to meet the charge for interest, even should the rate of exchange rule much higher than at present.

The several divisions of the Atlantic and Great Western Railway have been consolidated under the government of James Robb, Esq., whose reputation as a banker and railway administrator is established in Europe as well as in America. Mr. Robb, as President of the Atlantic and Great Western Railway, joins the direction of the Erie and other lines forming the through route between New York and St. Louis, so as to secure unity of action.

The price of issue has been fixed at 66. The terms of issue are as follows:—

5	per cent.	on application, being	£11	5 0	per bond of $1000.
10	„	on allotment	„ 22	10 0	„ „
15	„	19th November	„ 33	15 0	„ „
15	„	19th December	„ 33	15 0	„ „
21	„	19th January	„ 47	5 0	less £7 coupon due 1st January.
Total			£148	10 0	

Subscribers have the option of paying the instalments in advance, and will be allowed a discount of 9 per cent. per annum on such pre-payments.

After allotment scrip certificates will be issued to "bearer." These certificates will be exchanged for bonds to "bearer" on payment of the final instalment.

Forms of application may be obtained at the Consolidated Bank; or at the offices of the company, No. 2, Old Broad-street, London, E.C.; or of Mr. E. F. Satterthwaite, broker, 38, Throgmorton-street, London, E.C.—London, October 12, 1864.

FORM OF APPLICATION.

To be forwarded to the offices of the company, No. 2, Old Broad-street, London, E.C., after payment of the preliminary deposit to the bankers.

To the Atlantic and Great Western Railway Company.

Having paid to the Consolidated Bank (Limited) the sum of £ , I hereby request that you will allot me $ Second Mortgage Bonds of the Atlantic and Great Western Railway (Ohio Division), and I hereby agree to accept such bonds, or any less number that may be allotted to me. I am, your obedient servant,

Signature .....

Address in full.....

Date .....

ATLANTIC AND GREAT WESTERN RAILWAY COMPANY.

ISSUE OF SECOND MORTGAGE BONDS, PAYABLE IN LONDON.

Notice is hereby given, that NO APPLICATION FOR THESE BONDS will be RECEIVED after the 31st inst. By order.

No. 2, Old Broad-street, October 21, 1864.

MINING OFFICES, MANCHESTER.

MESSRS. HARVEY AND CO., MINING ENGINEERS, AGENTS, AND SHAREDEALERS, CLARENCE CHAMBERS, MANCHESTER, are at all times in a position to deal in all the market Dividend and Progressive Mine shares, and also to advise on all mining matters, being practically acquainted with the business, and having a daily communication from the mining districts of Devon and Cornwall.

Messrs. Harvey and Co. publish a monthly "Mining Circular," containing a valuable summary of mining information. Forwarded gratis on application.

The Circular for October contains a report on East Seton, Wh. Prosper, and Margaret.

MR. BRENTON SYMONS INSPECTS and REPORTS on ANY MINERAL PROPERTY. In all cases where procurable a plan will accompany his report.—18, Hatton-garden, E.C.

BRITISH AND FOREIGN INVESTMENT.—Mr. THOMAS SPARGO, STOCK, SHARE, AND MINING BROKER, 224 and 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., TRANSACTS EVERY DESCRIPTION of BUSINESS in the PURCHASE and SALE of SHARES in BANKS, CANALS, MINES, RAILWAYS, BRIDGES, INSURANCES, and ALL OTHER DESCRIPTIONS of BRITISH and FOREIGN STOCK.

Mr. Spargo has for sale shares in English mines paying from 10 to 20 per cent. upon the present price; in bi-monthly and quarterly dividends, as also a number of shares in good progressive mines, some of which he with confidence specially recommends to the public as sound investments.

Mr. Spargo gives every information as to position and prospects of all mining undertakings, upon application, either personally or by letter, and is enabled, through his long experience, aided by his monthly visits to Cornwall, Devon, and Wales, to obtain the most reliable information as to the numerous mines in those districts. He will, at all times give the best advice as to investment in mines, and, if necessary, inspect them himself; as in all cases he wishes to be guided by the intrinsic value of the property. Upon the receipt of 5s. he will furnish a selected list of dividend and progressive companies.

Mr. Spargo has published the following works, viz.:—

Statistics and Observations upon the Mines of Cornwall,	1859,	price 2s. 6d.
Ditto	ditto	1860, price 2s. 6d.
Ditto	ditto	1862, price 5s.
Ditto	ditto	1864, price 5s.

Physical, Geological, and Parish Map of Cornwall. Scale, three miles to an inch. Printed in three colours, showing distinctly the mining districts, the height of the hills, &c. Price 10s. 6d., on cloth and rollers.

Geological maps of the various mining districts, showing the boundary line of each mine, with the lodes, cross-courses, and elvan courses by which it is traversed. Price 2s. 6d. each.

A Model, or Relief, map of Cornwall (6 ft. 6 in. by 5 ft.), presenting the names of every town and village, as also every characteristic point of the county. Price £5 5s.

Dividends received, calls paid, and all orders promptly negociated.

Commission 1¼ per cent.

Mr. Spargo has 20 years' experience of mining, ten of which he was engaged in practical mining, and ten years he has transacted business in mining shares and stock, at 224 and 225, Gresham House, Old Broad-street, City, E.C.

Bankers: Bank of London, and the Metropolitan and Provincial Bank (Limited).

MESSRS. ROBERTS AND CO., 87, LONDON WALL, E.C., have selected a LIST of DIVIDEND and PROGRESSIVE MINES, which they can strongly recommend. Also, Bank, Railway, and other shares.

Commission, 1¼ per cent.

Office of Roberts and Co.'s "Price List, and Stock and Share Reporter," price 3d.

MESSRS. ROBERTS AND CO.'S PRICE LIST AND STOCK AND SHARE REPORTER contains Reports of Mines, Notices of Meetings, Plans of Mining Districts (showing the position of progressive mines in reference to those returning large profits), Railway Meetings, Joint-Stock Companies Intelligence, and Advice as to the Purchase and Sale of Stock.—87, London-wall, E.C.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH HALLENBEAGLE TIN AND COPPER MINING COMPANY (LIMITED).—TO BE SOLD, BY AUCTION, at the NORTH HALLENBEAGLE TIN AND COPPER MINE, situate in the parish of St. Agnes, in the county of Cornwall, by the direction of the liquidator of the said company, with the sanction of the Court, on Tuesday, the 25th day of October inst., at Eleven o'clock in the forenoon, subject to such conditions as will be then and there produced, either together or in lots, the MINE SETTS or GRANTS of the said company, and the undermentioned MINING MACHINERY and MATERIALS, viz.:—

ONE 45 in. cylinder PUMPING ENGINE, 8 ft. stroke, equal beam, with first piece of main rod and BOILER, about 13 tons, complete.

Balance-bob and connecting rod; shears, with pulleys and brasses; 8 arm capstan, with span beam, &c.; capstan rope, about 22 cwts.; 2 horse whims, shaft tackle and pulleys, wire-rope, hemp whim rope, underground gig, about 8 cwts. of new iron, 36 in. bellows, anvil, vice, and other smiths' tools, saw-pit timber, carpenters' bench and timber in saw-house, grindstone and frame, wood house for carpenters' shop, and material house, wood house on the dressing-floors, wood picking shed, wooden launders and stands, ore dressing materials, scales, beams, stand, and a quantity of other articles in general use in mines; and also account-house furniture.

UNDERGROUND.

House water lift; 30 fms. of 6 in. lift, 6 tons; 6 in. plunger pole; stuffing box and gland, about 6 cwts.; pole case, 6 cwts.; H and bottom doorpiece, 15 cwts.; 20 12 in. pumps diameter, 13 tons; 3 12 in. pumps diameter, 2 tons; 11 in. plunger pole, 10¼ ft. long; pole case, 13 cwts.; H piece, 15 cwts.; cut doorpiece, 15 cwts.; cistern windbore, 10 cwts.; 11 in. working barrel, 7 cwts.; doorpiece, 12 cwts.; windbore, 8 cwts.; bottom lift; 11 in. doorpiece, 15 cwts.; working barrel, 16 cwts.; sinking windbore, 16 cwts.; 4 buckets and prongs; 40 fms. 11 in. main rods in shaft; 8 hammered strapping plates, 32 cwts.; 8 rolled ditto, 24 cwts.; flange and rod bolts, 15 cwts.; staples and glands, 20 cwts.; 2 spare pulleys, 15 cwts.; 3 wood cisterns and cistern bearers; 20 fms. of bucket rods; clasp joints, &c., 10 cwts.

The mine and materials may be inspected at any time prior to the sale, on application to the person in charge thereof; and further particulars, with conditions of sale, may be obtained of Mr. John Bingley, of Leeds, engineer, the liquidator of the said company; and of John Blackburn, Leeds, the solicitor to the liquidator; or of Joseph Roberts, solicitor, Truro, his agent.

Dated Registrar's Office, Truro, October 5, 1864.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the NORTH WHEAL SETON COPPER MINING COMPANY (LIMITED).—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE-NAMED COMPANY by the Court was, on the 12th day of October inst., presented to the Vice-Warden of the Stannaries, by George Simpson, a creditor and also a contributory of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the College Hall, Cathedral-yard, Exeter, on Saturday, the 29th day of October inst., at Half-past Two o'clock in the afternoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioner, his solicitor, or agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioner or his solicitor, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before Wednesday, the 26th day of October inst., and notice thereof must at the same time be given to the petitioner, his solicitor, or agents.

HODGE, HOCKIN, AND MARRACK, Truro

(Agents for John Everard, Upton, Leeds, Solicitor for the Petitioner).

Dated Truro, October 14, 1864.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL ALBION SILVER-LEAD MINING COMPANY.—By an order made by His Honour the Vice-Warden of the Stannaries in the above matter, dated the 18th day of October inst., on the petition of Richard Henry Stevens, a shareholder and contributory of the said company, it was ordered that the said WHEAL ALBION SILVER-LEAD MINING COMPANY should be WOUND-UP by this Court, under the provisions of the Companies Act, 1862. HENRY SEWELL STOKES, Truro

Dated Truro, October 19, 1864. (Solicitor for the Petitioner).

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WEST CRINNIS COPPER MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY, who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby required to COME IN and PROVE THEIR SEVERAL DEBTS or CLAIMS, at the Registrar's Office, Truro, on Friday, the 28th day of October inst., at Eleven o'clock in the forenoon, or in default thereof they will be excluded from the benefit of any distribution made before such proof.

And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court, at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL,

Dated October 19, 1864. Registrar of the above-named Court, Truro, Cornwall.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the DULTA TIN MINING COMPANY (LIMITED).—TENDERS, stating the highest price which will be given for the 20 in. cylinder STEAM ENGINE, 4½ ft. stroke, with ONE BOILER 7 tons, complete; 22 in. cylinder STEAM ENGINE, with ONE BOILER 6¼ tons, not complete or erected; 12 heads stamps, axle, &c., with launders complete; coals in engine-house, bell and frame, tallow, leather, halvans and leavings, and a variety of other articles in general use in mines, will be received at the Registrar's Office, Truro, until Tuesday, the 1st day of November next.

HODGE, HOCKIN, AND MARRACK, Truro

(Solicitor to the Petitioner).

Dated Registrar's Office, Truro, October 20, 1864.

VALUABLE COPPER AND TIN MINES FOR SALE.

MR. GEORGE SEALY has received instructions to OFFER FOR SALE, BY AUCTION, on Tuesday, October 25, at One o'clock in the afternoon, at the account-house, on the mines, the VALUABLE SETTS and MACHINERY of the CHARLOTTE UNITED MINES, in the parish of PERRANUTHNOE.

The sett is extensive, held under favourable conditions, and has been already largely developed.

The machinery is complete, in excellent order, and comprises the following:—60 in. PUMPING ENGINE, 11 ft. stroke in shaft, and 12 in. cylinder, with FOUR BOILERS; 80 fms. 16 in. and 20 fms. 13 in. pumps; 18 in. steam whim, with crusher attached.

For further particulars, apply to the Auctioneer; to the Agents, on the mines; or to Mr. T. P. Tyack, Helston.—Marazion, October 11, 1864.

IRON.—TO BE GRANTED, for a term of 21 years, the RIGHT to WORK a very EXTENSIVE MINE of RICH HEMATITE IRON ORE, situate in the parish of SHAUGH PRIOR, on the south coast of Devon, about six miles from a wharf belonging to the proprietors, where the ores can be shipped free of dues, and at all seasons of the year.

The South Devon and Tavistock Railway passes within a very short distance of the mine, and is in direct communication with the wharf, thereby affording facilities for running the trucks alongside of the vessels.

For further particulars, and to treat for a sett, application to be made to Mr. C. L. Radcliffe, solicitor, Plymouth.

TO IRON AND COAL MASTERS AND OTHERS.—IMPORTANT MINERAL PROPERTY TO BE LEASED, situate in the parish of MERTHYR TYDVIL, county of GLAMORGAN, SOUTH WALES. About SIX HUNDRED ACRES of LAND, called CEFN GLAS, and other farms, adjoining east to the property where the far-famed Nixon and Co.'s steam coal underlies. Veins of coal have been proved of 3 ft. thickness. The Taff Vale and Great Western Railways, and the Glamorganshire Canal, run through the property aforesaid.—Further particulars by letters, addressed Mr. Lewis Jenkins, Ynysowen Farm, Troedyrhiw, Merthyr Tydvil. Mr. J. Jenkins, Cefn Glas, within ten minutes' walk from the Quaker's Yard station on the railways aforementioned, will show the property.

TO COLLIERY PROPRIETORS.—TO BE SOLD, BY PRIVATE CONTRACT, ONE 25 in. cylinder CONDENSING BEAM ENGINE, 5 ft. stroke, with fly-wheel 14 ft. diameter, jack head and feed pump 6 ft. diameter, winding drum for flat rope, 2 pump cranks for 5 ft. stroke, with TWO wrought-iron CYLINDRICAL BOILERS 24 ft. long, 6 ft. diameter, with steam pipes and fittings; the above in good order, and suitable for pumping and winding. Also, ONE DIRECT ACTING PUMPING ENGINE, 45 in. cylinder, 9 ft. stroke, with metallic piston, double beat valves and connections; ONE wrought-iron CYLINDRICAL BOILER, 29 ft. long, 6 ft. diameter, in excellent working order.—To view and treat for the same, apply to Mr. Hales, Broncoed Colliery, Mold, Flintshire.

AYRSHIRE.

MINERALS.—TO BE LET, for 30 years, the very superior HEMATITE IRON ORE, BLACKBAND, and CLAYBAND IRONSTONE, COAL, LIMESTONE, FREESTONE, FIRE-CLAY, SAND, and COMMON CLAY, under and within the LANDS of GARPEL, WHITEHAUGH, LIMMERHAUGH, and CHAPELHOUSE, extending to 4800 acres imperial measure, parts of the ESTATE of CRAIGENGILLAN, situated in the parishes of MUIRKIRK and SORN, and shire of AYR. The projected line of railway from Ayr to Douglas has been laid off through the farm of Limmerhaugh.

For further particulars, application may be made to Mr. Alex. Smith, W.S., 18, York-place, Edinburgh, where specimens of the hematite may be seen.

Mr. G. Gemmell, tenant in Garpel, will point out the mineral field.

AYRSHIRE.

MINERALS.—TO BE LET, for such number of years as may be agreed on, the COAL under and within the LANDS of UPPER BEOCH extending to 600 acres imperial measure, or thereby, being part of the ESTATE of CRAIGENGILLAN, lying in the parish of NEW CUMNOCK, in the county of AYR.

This field comprises the well-known Aldnaw Smithy Coal, and is situated within four miles of the railway station at Dalmellington.

For further particulars, application may be made to Mr. Alex. Smith, W.S., 18, York-place, Edinburgh; or to Mr. Kennedy Smith, Berbeth Mains, Dalmellington.

India Office.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL, notice is hereby given that the DIRECTOR-GENERAL OF STORES FOR INDIA will be READY, on or before MONDAY, the 24th instant, to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to supply— SLIP COPPER.

And that the conditions of the said contract may be had on application at the India Store Office, Cannon-row, Westminster, where the proposals are to be left any time before Two o'clock P.M. of the said 24th day of October, 1864, after which hour no tender will be received. GERALD C. TALBOT, Director-General.

India Office, October 13, 1864.

VALUABLE MINING MACHINERY AND MATERIALS FOR SALE, BY PUBLIC TENDER.—The whole of the VALUABLE MACHINERY and MATERIALS now standing upon and in the PENRHIW MINE, situate about 1½ mile from Ponterwyd, and about 14 miles from Aberystwith, is hereby OFFERED FOR SALE, BY PUBLIC TENDER, by order of the mortgagee. Tenders, in writing, to be delivered by noon on Wednesday, the 2d day of November, 1864, at the offices of Messrs. Brady and Son, No. 35, Old Jewry, London.

Particulars, with conditions of sale, can be obtained at the mine; of Mr. Theo. Paul, Aberystwith; and of Messrs. Brady and Son. The machinery and effects can be viewed on application to Capt. Boundy, on the mine.

MINERAL PROPERTIES.—WANTED, a FEW GENTLEMEN, with £500 each, to ASSIST in DEVELOPING VALUABLE LEAD DEPOSITS in ITALY, near the French frontier. The OWNER of a SEAM of ANTIMONY, over 2½ yards solid, WISHES to CONTRACT to DELIVER TWO THOUSAND TONS PER ANNUM, at £6 per ton, f.o.b. at Marseilles; £1000 embarked in connection with this would secure a large return. FOR SALE, FIVE HUNDRED or SIX HUNDRED TONS of POOR ANTIMONY ORE (about 20 per cent.)—For particulars, address "M. A. F.," Poste Restante, Marseilles.

COPPER MINE TO BE LET.—A COPPER LODE having been DISCOVERED on the LANDS of BALLYKNOCK, about two miles from Taghmon, in the county of Wexford, a CONTRACT will be MADE with a COMPETENT CAPITALIST or COMPANY who might be DISPOSED to TAKE a LEASE of the same, and commence to work at once.

The shaft is 84 ft. deep, it is sunk through the lode, which is very large, and the joints thereof when broken are strongly marked with sulphur and particles of copper, and in the opinion of several experienced miners who have viewed the place it is of a very promising appearance; the copper, also, in their estimation, is of a very prime quality, and the concern is altogether well worthy the attention of parties anxious to engage in such operations.

All further particulars may be known by application to Charles D. Ingham, Esq., 37, Usher's Quay, Dublin; or to Michael Macnamara, Esq., 5, Lower Dominick-street, Dublin.

MERIONETHSHIRE, NORTH WALES.

TO BE DISPOSED OF, a SLATE QUARRY PROPERTY, vein proved, and position commanding all advantages. Also, a VALUABLE GRANT, possessing a RICH SILVER-LEAD MINE, with other lodes, very favourable.—To treat for the same, apply to Mr. H. P. M. Owen, C.E., Penrhyndendraeth, via Carnarvon.

Mr. Owen has OTHER MINES and QUARRIES TO DISPOSE OF. Also, begs to offer his services to gentlemen in all inspections of native mineral, with practical reports thereon. Immediate attention given.

NEW REJECTED RAILS FOR SALE, in Newcastle-on-Tyne, admirably adapted for COLLIERIES and CONTRACTORS.—Apply to Messrs. Shaw and Thomson, 150, Leadenhall-street, London, E.C.

PATENT FOR COPPERING IRON.—A NEW and VALUABLE INVENTION for COPPERING IRON in the most solid and enduring manner TO BE DISPOSED OF. As the premium required is of considerable amount, no one but substantial parties will be treated with.—Address, Edward Gee and Co., 27, Charlotte-street, Birmingham, where samples may be seen.

FOR SALE, the RIGHT to the PATENT of a VALUABLE IMPROVEMENT in VALVES and BUCKETS for PUMPS, and in VALVES or COCKS for OTHER USES.—For particulars, apply to Mr. W. T. Rawle, patent and mining agent, 39, Budge-street, Bristol.

WIRE ROPES FOR SALE, BY PRIVATE CONTRACT.—ONE WIRE ROPE, 196 fms. long; EIGHT ditto, each 183 fms. long; and TWO ditto, each 116 fms. long; all 4¾ in. circumference, weighing 22 lbs. per fm., and made of the best charcoal iron wire, by Messrs. Glass, Elliott, and Co.—Applications to be addressed Messrs. Cochrane, Grove, and Co., Clifton Suspension Bridge Works, Bristol, where every information can be obtained.

MARINE STEAM ENGINES FOR SALE.—TO BE SOLD, ONE PAIR of FIRST-CLASS MARINE PADDLE side lever ENGINES, of 400 nominal horse power, cylinders 73 in. diameter and 6 ft. stroke, malleable iron side levers and framing, brass steam and expansion valves and facings, brass air pumps, air pump buckets and valves, copper steam, feed, blow-off, and injection pipes. These engines are of first-class workmanship, and were only used about six years, during which time they were working in Her Majesty's Mail Service in the Pacific.—Address, "A. R.," Mining Journal office, 26, Fleet-street, London, E.C.

HORIZONTAL ENGINES FOR SALE, at very low prices:—One 12 in. cylinder, 24 in. stroke; one 12 in. cylinder, 36 in. stroke; and two 14 in. cylinders, 24 in. stroke. All ready for delivery, and may be had with or without fly-wheels.—Apply to Messrs. E. Page and Co., Laurence Pountney-place Laurence Pountney-hill Cannon-street E.C.

RAILWAY WAGONS TO BE LET.—Apply to Messrs. W. L. and T. Underhill, Tipton.

TO SPECULATORS AND CAPITALISTS.—TO BE LET, ON LEASE, the SEAMS of COAL lying UNDER ONE HUNDRED AND TWENTY ACRES of LAND in WARWICKSHIRE; and also therewith an OLD ESTABLISHED TILERY and BRICK YARD situated thereon, where there is an INEXHAUSTIBLE BED of FIRST QUALITY BLUE or IRON BRICK CLAY, adjoining to a main line of railway, to which a siding has been attached.—For particulars apply, by letter only, 339, *Herald* office, Birmingham.

TO IRONMASTERS.—The COEDCAE COAL COMPANY are PREPARED to DISPOSE of TWO HUNDRED TONS DAILY of their celebrated No. 3 RHONDDA COALS. They are pure, and eminently suitable for all iron making, raw or in coke.—Post-office Chambers, Docks, Cardiff.

TO QUARRY PROPRIETORS AND CAPITALISTS.—TO BE LET OR SOLD, a capital prospect for a FLAG and SLATE QUARRY of the best blue stones. The vein is 100 yards wide, crossing the Newtown and Machynlleth (Montgomeryshire) Railway. Plenty of water at all times close by to drive any machinery necessary. The turnpike-road is on the other side of the river. A level is driven into the rock 20 yards, improving as it goes down. The blocks deepen one yard in three. Owen Hughes, late manager, Llechwed Quarry.—Apply to Mr. John Jones, Coedyrhyd, Commins Coch, via Salop.

TIN-PLATES—AGENCY for the SALE of WANTED, by a FIRST-CLASS HOUSE in the MIDLAND DISTRICT.—Address, "Tin-plates," Mining Journal office, 26, Fleet-street, London, E.C.

ISAAC FRANCIS, NANT, WREXHAM, a dresser of 30 years' experience, is OPEN to INSPECT ANY DRESSING PLACE on moderate terms. Mr. Francis can introduce PLANS of IMPROVEMENTS that will SAVE THIRTY PER CENT. COST in certain departments of any dressing floors.

TO INVENTORS AND PATENTEES.—A GENTLEMAN having an extensive connection with manufacturers, merchants, and others, would be GLAD to UNDERTAKE the SALE of INVENTIONS or PATENTED ARTICLES, on commission.—Apply to Mr. Rawle, patent office, 14, Clare-street, Bristol.

N.B.—Continental and foreign agencies solicited.

CAPT. C. WILLIAMS, TYN-Y-WERN, TALIESIN, via SHREWSBURY, has had upwards of 20 years' practical experience in mining, during which time he had the entire management of several English and Welsh mines. Residing in the centre of the CARDIGANSHIRE MINING DISTRICT, and in close proximity to those of MERIONETHSHIRE and MONTGOMERYSHIRE, he OFFERS HIS SERVICES to SURVEY and REPORT UPON ANY MINE.

MR. GEORGE HENWOOD, MINING ENGINEER, LOCHHEAD HOUSE, LOCHWINNOCH, SCOTLAND, OFFERS his SERVICES and ADVICE on mines situated in any part of England, Scotland, Wales, Ireland, Isle of Man, &c. Mr. Henwood's extensive experience in his peculiar department of mining science is well known, and will be exerted to the utmost for the benefit of his clients.

NEW COMBINED TURBINE, WINDING, AND PUMPING MACHINERY,

MANUFACTURED by GEORGE LOW,

MILLGATE IRONWORKS, NEWARK-UPON-TRENT,

Who respectfully begs to bring the above to the notice of the mining public, as an exceedingly cheap and easy method of applying water-power for the above purposes.

The TURBINE, WINDING, and PUMPING MACHINERY are all fixed complete to one strong cast-iron bed plate, which can be placed in any situation without pit or excavation, and any height not exceeding 33 ft. from bottom of fall, the supply and suction pipe being all that is required to be connected to it, and can be brought in any direction. This combined machine can be easily removed when necessary.

G. Low begs also to state that the TURBINE is the most efficient and the cheapest method of applying water-power for mining purposes.

MANUFACTURER of WINDING, PUMPING, CRUSHING, STAMPING MACHINERY, WINDING ENGINES, WATER WHEELS.

IMPROVED TURBINE WATER WHEELS CONSTRUCTED either to WORK VERTICALLY or HORIZONTALLY, and upon the MOST SCIENTIFIC and EFFECTIVE PRINCIPLE.

G. Low begs to recommend a special class of turbine adapted for extreme high falls (300 to 500 ft.), and consuming small quantity of water. This turbine will work with equal advantage without running at an excessive velocity. Also,

MANUFACTURER of IMPROVED BORING MACHINES for DRIVING ADITS.

Now ready, price 2s. 6d., by post 32 penny stamps,

MR. HOPTON'S NEW WORK, entitled CONVERSATIONS ON MINES, &c., BETWEEN "A FATHER AND SON." Thirteen plans on ventilation and working out coal, dialling, planning, and taking the dip and rise of the mine illustrated.

Near 900 copies are ordered in Wigan alone.

Address Mr. J. J. Campbell, Cropper's-hill, St. Helen's; or the author, 73, Peter-street, St. Helen's.

CLAYTON, SHUTTLEWORTH, AND CO.,
ENGINEERS,
MANUFACTURERS of PORTABLE and FIXED STEAM ENGINES, MACHINERY for PUMPING, HOISTING, GRINDING, SAWING, &c., ENGINES for STEAM CULTIVATION, SELF MOVING ENGINES for COMMON ROADS and AGRICULTURAL PURPOSES GENERALLY.
STAMP END WORKS, LINCOLN; and
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ALSO AT
LOWENGASSE No. 44, LANDSTRASTE, VIENNA, and GEGENUBER DEM BAHNHOF, PESTH.
Descriptive, illustrated, and priced catalogues free per post.
SPECIAL DRAWINGS WHEN REQUIRED.
THE BEST STEAM THRASHING MACHINERY MADE.

Exhibition Medal, 1862.

WEIGHING MACHINERY
CONSISTING OF
PLATFORM WEIGHING MACHINES and HIND'S PATENT RAIL and ROAD WEIGHBRIDGES, overhead TRAVELLING WEIGHING CRANES and CRABS, RAILWAY WEIGHING TURNABLES, &c.
CRANES
Of the WALL, PILLAR, PORTABLE, or TRAVELLING KINDS; and CRABS and WINCHES for STEAM or HAND POWER, &c. Also, TURNTABLES, WATER COLUMNS, TANKS, and PUMPING MACHINERY, and GENERAL RAILWAY PLANT, manufactured by
RICHARD KITCHIN, ENGINEER AND IRONFOUNDER,
SCOTLAND BANK IRONWORKS, WARRINGTON.

Swan Rope Works.

GARNOCK, BIBBY, AND CO.,
CHAPEL STREET, LIVERPOOL,
MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.
MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER, and THIRTY PER CENT. CHEAPER than Russian hemp rope.
WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

First Class Silver Medal, Royal Polytechnic Society, Falmouth, 1864.

CREASE'S PNEUMATIC TUNNELLING ENGINE,
for SUPERSEDING the SLOW and EXPENSIVE USE of MANUAL LABOUR in SINKING SHAFTS, DRIVING LEVELS, TUNNELLING, &c., is guaranteed to drive through any rock of average hardness at a minimum rate of 1 fm. per diem, and to sink shafts at the rate of 2 fms. in three days.
Mr. CREASE will undertake contracts for sinking shafts, driving levels, &c., at an enormous reduction of time and great saving in cost.
Applications to be addressed (for the present) to the patentee, Mr. E. S. CREASE, Tavistock, Devon.

Prize Medal Awarded Great Exhibition, 1851, and International Exhibition, 1862.

PATENT SAFETY FUZE WORKS, TUCKINGMILL,
CORNWALL.—We beg respectfully to inform the public that since the decease of the late Mr. THOMAS DAVEY this firm has consisted of JOHN SOLOMON BICKFORD, GEORGE SMITH, FRANCIS PRYOR, SIMON DAVEY, and WILLIAM BICKFORD SMITH. It is requested that all letters may be addressed, and all cheques and drafts made payable to us, as BICKFORD, SMITH, AND CO.

THE UNITY PATENT SAFETY FUSE COMPANY
SCORRIER, CORNWALL, SOLICIT ORDERS for the DIFFERENT KINDS of SAFETY FUSE which they are PREPARED to SUPPLY, of SUPERIOR QUALITY, and of ANY LENGTH.

Gun Cotton Manufactory.

MESSRS. THOMAS PRENTICE AND CO.,
GREAT EASTERN CHEMICAL WORKS, STOWMARKET, SUFFOLK.
This manufactory has been established for the purpose of preparing GUN COTTON, according to the Austrian process, and was opened on the 26th of January last, under the inspection of Baron Lenk. Messrs. Thomas Prentice and Co. are now able to SUPPLY GUN COTTON, in its most approved form, either for the purposes of engineering and mining, or for military and submarine explosion, and for the service of artillery, as a substitute for gunpowder.
The advantages of Baron Lenk's GUN COTTON are the following:—
FOR PURPOSES OF ARTILLERY.—The same initial velocity of the projectile can be obtained by a charge of gun cotton one-fourth of the weight of gunpowder. There is no smoke from the explosion of gun cotton; it does not foul the gun, nor heat it to the injurious degree of gunpowder. There is much smaller recoil of the gun. The same initial velocity of projectile is produced, with a shorter length of barrel. In projectiles of the nature of explosive shells it breaks the shell more equally into much more numerous pieces than gunpowder. When used in shells, one-third the weight of gun cotton produces double the explosive force of gunpowder.
FOR CIVIL ENGINEERING AND MINING.—In driving tunnels through hard rock a charge of gun cotton of given size exerts double the explosive force of gunpowder, thus a smaller number of holes is necessary. It may be so used as, in its explosion, to reduce the rock to much smaller pieces than gunpowder, and so facilitate its removal. As gun cotton produces no smoke, the work can proceed much more rapidly, and with less injury to the health of the miners. In working coal mines the advantages of bringing down much larger quantities of material with a given charge, and the absence of smoke in the explosion, enable a much greater quantity of work to be done in a given time at a given cost. The weight of gun cotton required to produce a given effect in mining is only one-sixth part of the weight of gunpowder. In blasting rock under water the wider range and greater force of a given charge is a great element in cheapening the cost of submarine work. The peculiar local action of gun cotton, to which the effects of gunpowder show no analogy, enables the engineer to destroy and remove submarine stones and rocks, without the preliminary delay and expense of boring chambers for the charge.
FOR MILITARY ENGINEERING.—The facility of transport is increased, the weight of gun cotton being one-sixth that of gunpowder. The peculiar localised action of gun cotton facilitates the destruction of bridges and palisades, and every obstacle. For submarine explosion, gun cotton has the advantage of a much wider range of destructive power than gunpowder. For the same purpose gun cotton, from its lightness, has the advantage of keeping afloat the water-tight case in which it is contained, while gunpowder sinks it to the bottom.
FOR NAVAL WARFARE.—In the batteries of ships, between decks, and in casemated forts, the absence of smoke facilitates continuous rapid firing. The absence of fouling and of heating are equally advantageous for naval as for military artillery.
GENERAL ADVANTAGES.—Time, damp, and exposure do not alter the qualities of the patent gun cotton. It has already been preserved 10 years without injury or decay. It can be transported through fire without danger, simply by being wetted, and when dried in the open air it becomes as good as before. In the case of a ship, or a fortress, or a city being on fire, this quality may be of the greatest value. It is much safer than gunpowder, owing to its being manufactured in the shape of rope or yarn. It cannot escape from its package, or be spilled by accident. The patent gun cotton is entirely free from the danger of spontaneous combustion, and secures that degree of safety and certainty which, at the time of the original invention, the gun cotton of Schönbein did not possess.
Messrs. THOMAS PRENTICE and Co. are now in a position to contract with the owners of mines, engineers, contractors, and governments for gun cotton prepared in the various forms required for their use. Mining charges will be supplied in the rope form, according to the diameters of bore required, and gun cotton match-line, as well as instructions for using it in mines, will be supplied with it.
The great advantage of gun cotton make its use in practice very much cheaper than its comparative price would appear to show; in blasting rock, for example, the rapidity and quantity of the work done, with a given expense of wages, &c., is largely in favour of gun cotton.
Messrs. THOMAS PRENTICE and Co. are also prepared to manufacture the gun cotton, and deliver it in the form of gun cartridges, adapted to every description of ammunition; all they require for this purpose being a drawing of the gun, gunpowder cartridges, and ammunition, with the specification of weights, sizes, and initial velocities.
Artillerists who prefer to manufacture their own cartridges may make special arrangements with the patentee through Messrs. PRENTICE and Co.
Stowmarket, March 10, 1864.

THE BANKING, MINING, AND JOINT-STOCK COMPANIES REVIEW, A JOURNAL OF COMMERCE, TRADE AND MANUFACTURE, SCIENCE AND THE ARTS.
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RAILWAYS AND MINES,
Capitalists who seek safe and profitable investments, free from risk, should act only upon the soundest information. The market prices for the day are for the most part governed by the immediate supply and demand, and the operations of speculators, without reference to the *bona fide* merits of the property. Railways depend upon the traffic, expenditure, and capital accounts, the probabilities of alliance or competition with neighbouring companies, the creation of new shares, the state of the money market as affecting the renewal of debentures, and other considerations founded on data to which those only can have access who give special attention to the subject. Mines afford a wider range for profit than any other public securities. The best are free from debt, have large reserves, and pay dividends bi-monthly varying from £15 to £25 per cent. per annum. Instances frequently occur of young mines rising in value 400 or 500 per cent. But this class of security, more than any other, should be purchased only upon the most reliable information. The undersigned devote special attention to railways and mines, afford every information to capitalists, and effect purchases and sales upon the best possible terms. Thirty years' experience in mining pursuits justifies us in offering our advice to the uninitiated in selecting mines for investment; we will, therefore, forward, upon receipt of Post-office order for 5s., the names of six dividend and six progressive companies that will, in our opinion, well repay capitalists for money employed.
Messrs. TREDINNICK AND CO., STOCK and SHAREBROKERS, and DEALERS IN BRITISH MINING SHARES, 78, LOMBARD STREET, E.C.

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The results of twelve months' experience in the working of these machines, by the West Ardsley Company, have proved most satisfactory, their use being found to CHEAPEN the COST and IMPROVE the average SIZE of the COAL, to LIGHTEN the LABOUR, and also to MODIFY the SANITARY CONDITION of the MINE.
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This oil gives a pure, white, soft, and brilliant light, easily regulated, and portable. For works or public buildings, where gas is not desirable, the brilliancy and economy of the article are unequalled.

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BASTIER'S PATENT CHAIN PUMP,
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J. U. BASTIER begs to call the attention of proprietors of mines, engineers, architects armers, and the public in general, to his new pump, the cheapest and most efficient ever introduced to public notice. The principle of this new pump is simple and effective, and its action is so arranged that accidental breakage is impossible. It occupies less space than any other kind of pump in use, does not interfere with the working of the shafts, and unites lightness with a degree of durability almost imperishable. By means of this hydraulic machine water can be raised economically from wells of any depth; it can be worked either by steam-engine or any other motive power, by quick or slow motion. The following statement presents some of the results obtained by this hydraulic machine, as daily demonstrated by use:—
1.—It utilises from 90 to 92 per cent. of the motive power.
2.—Its price and expense of installation is 75 per cent. less than the usual pumps employed for mining purposes.
3.—It occupies a very small space.
4.—It raises water from any depth with the same facility and economy.
5.—It raises with the water, and without the slightest injury to the apparatus, sand, mud, wood, stone, and every object of a smaller diameter than its tube.
6.—It is easily removed, and requires no cleaning or attention.
J. U. BASTIER, sole manufacturer, will CONTRACT to ERECT his PATENT PUMP at HIS OWN EXPENSE, and will GUARANTEE IT FOR ONE YEAR, or will GRANT LICENSES to manufacturers, mining proprietors, and others, for the USE of his INVENTION.
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Warehouse, 81, Upper Ground-street, London, S.

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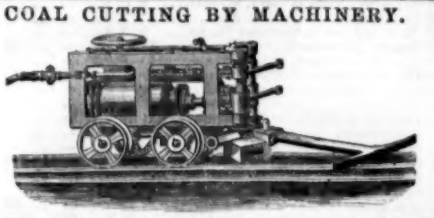

MESSRS. RIDLEY AND CO. have, by recently PATENTED IMPROVEMENTS, COMPLETED their TRUNK COAL CUTTING MACHINE, WORKED by COMPRESSED AIR, and are NOW PREPARED to NEGOCIATE for the USE, and to SUPPLY MACHINES, which will be found to COMBINE SIMPLICITY of CONSTRUCTION with PORTABILITY and ECONOMY in WORKING. By the use of these machines a CONSIDERABLE SAVING of COAL is EFFECTED, and the COST of LABOUR MUCH REDUCED. Each machine will be guaranteed as to its capabilities, &c.
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The PATENT TUBULAR TUYERE possesses GREAT ADVANTAGES over the ORDINARY TUYERES, both for its DURABILITY and EASY WORKING. A current of cold water going direct to the nozzle prevents their destruction, however much they may be exposed to the fire.
We repair them at half the first cost, making them equal in size to new ones, all parties returning them carriage paid.

No. 1 tuyere,	16 in.	long	28s. each.
No. 2	18		32s.
No. 3	20		36s.
No. 4	22		40s.
No. 5	24		44s.

Delivered at Chesterfield station. Terms, nett cash quarterly.

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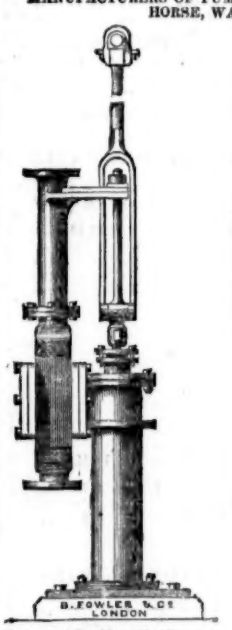
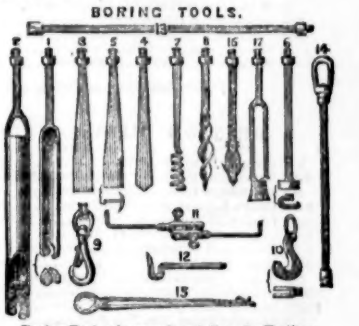
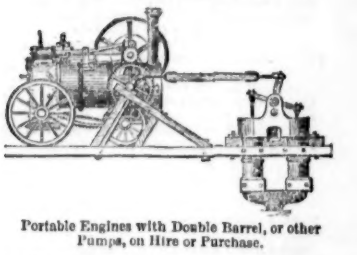


Improved Double-action Pumps.

BORING TOOLS.



Boring Tools of every description, for Testing Ground and for Artesian Wells.



Portable Engines with Double Barrel, or other Pumps, on Hire or Purchase.

Full information, Drawings, Price Lists, &c., relating to the above, and to Hydraulic Machinery of all descriptions—Crabs, Pulleys, Blocks, and Hoisting Tackle of superior manufacture—may be had on application.

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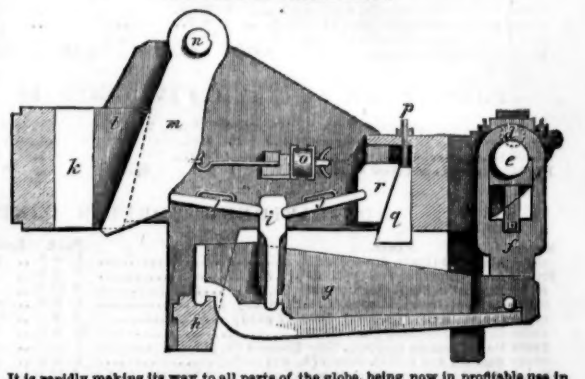
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.



It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England.
The above section illustrates Blake's Stone Breaker, just as made the last five years, and is fully protected in every part by patents.
Extract from Specification:—A short but powerful vibration is imparted to one or both of the jaws by any convenient arrangement, and combination of powerful levers, worked by a crank or eccentric on the main shaft.
LEGAL PROCEEDINGS will be taken at once against any person or persons found making, using, or vending any machine, the construction of which will constitute an infringement on the above patent. Read extracts of testimonials:—
Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.
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Our 15 by 7 in. machine has broken 4 tons of hard winstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.
Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.
Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS
General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS
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MEADOW LANE, LEEDS.
Only maker in the United Kingdom.

THE MINING SHARE LIST

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last paid.
1000	Alderley Edge (cop.), Cheshire [L.]	10 0 0	— ..	..	.. 10 8 0 .. 0 15 0	—April, 1864
4000	Bedford United (copper), Tavistock†	2 6 0	— ..	2½ 2½	— 13 11 6 .. 0 2 6	—Oct. 1864
1248	Boscaswell (tin, copper), St. Just	6 15 0	— ..	..	.. 1 5 0 .. 0 5 0	—May, 1864
200	Botallack (tin, copper), St. Just	91 5 0	— ..	..	.. 477 15 0 .. 3 0 0	—May, 1864
8000	Bronfloyd (lead), Cardigan [L. £3]	2 7 6	— ..	..	.. 0 19 0 .. 0 2 6	—April, 1864
916	Cargoll (silver-lead), Newlyn	15 5 7	— ..	37 38	.. 8 10 0 .. 0 15 0	—Aug. 1864
1000	Carn Brea (copper, tin), Illogan	15 0 0	— ..	..	.. 280 10 0 .. 2 0 0	—June, 1864
2900	Clifford Amalgamated (cop.), Gwen.	30 0 0	31 ..	30 31	.. 32 18 6 .. 0 10 0	—Oct. 1864
12000	Copper Miners of England	25 0 0	— ..	..	.. 7½ per cent.	—Half-yrly.
40000	Ditto ditto (stock)	100 0 0	— ..	..	.. 1 per cent.	—Half-yrly.
867	Cwm Erfin (lead) Cardiganshire [L.]	7 10 0	— ..	..	.. 12 18 0 .. 0 15 0	—Oct. 1864
128	Cwmystwith (lead), Cardiganshire*	60 0 0	— ..	..	.. 271 10 0 .. 4 0 0	—Sept. 1864
280	Derwent Mines (sil.-lead), Durham	300 0 0	— ..	..	.. 152 0 0 .. 5 0 0	—June, 1864
1024	Devon Gt. Con. (cop.), Tavist.* [S.E.]	1 0 0	— ..	580 600	— 933 0 0 .. 10 0 0	—Sept. 1864
358	Dolcoath (copper, tin), Camborne*	128 17 6	500 ..	..	.. 775 10 0 .. 6 0 0	—Oct. 1864
12800	Drake Walls (tin, copper), Calstock	2 1 0	— ..	..	.. 0 18 0 .. 0 1 6	—May, 1863
512	East Basset (cop.), Redruth [S.E.]*	29 10 0	62 ..	56 58	— 125 0 0 .. 2 0 0	—Sept. 1864
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6	26½ ..	23½ 24½	— 12 2 0 .. 0 17 0	—Oct. 1864
300	East Darren (lead), Cardiganshire*	32 0 0	— ..	..	.. 101 10 0 .. 2 0 0	—Oct. 1864
128	East Pool (tin, copper), Pool, Illogan	24 5 0	— ..	..	.. 369 10 0 .. 4 0 0	—June, 1864
5000	East Rosewarne (cop., tin), Gwinear	2 15 0	— ..	..	.. 0 2 6 .. 0 2 6	—Sept. 1864
1906	East Wheal Lovell (tin), Wendron	2 13 6	9 ..	11¼ 12	.. 1 10 0 .. 0 10 0	—May, 1864
2800	Foxdale (lead) Isle of Man [L.]	25 0 0	— ..	..	.. 64 0 0 .. 1 0 0	—June, 1864
5000	Frank Mills (lead), Christow	3 18 6	— ..	..	.. 1 9 6 .. 0 5 0	—Aug. 1864
12500	Great Laxey (lead), Isle of Man [L.]	4 0 0	16 ..	15 16	— 1 1 0 .. 0 10 0	—Sept. 1864
1799	Great Wheal Fortune (tin), Breage	18 8 0	— ..	7 8	.. 5 15 0 .. 0 10 0	—Nov. 1863
5908	Great Wh. Vor (tin, cp.), Helston [S.E.]	40 0 0	29 ..	30½ 31½	— 4 12 0 .. 0 12 6	—Sept. 1864
119	Great Work (tin), Germoe	100 0 0	— ..	..	.. 15 0 0 .. 5 0 0	—Aug. 1864
1024	Herodsfoot (ld.), near Liskeard [S.E.]	8 10 0	39 ..	37 39	.. 29 15 0 .. 1 15 0	—Oct. 1864
400	Lisburne (lead), Cardiganshire, Wales*	18 15 0	— ..	..	.. 427 10 0 .. 3 0 0	—Oct. 1864
2000	Mass-y-Safn (lead) [L.]	20 0 0	— ..	..	.. 1 0 0 .. 1 0 0	—Oct. 1864
9000	Marke Valley (copper), Caradon	4 10 0	4¾ ..	4 4¼	.. 2 15 6 .. 0 1 6	—Oct. 1864
3000	Minera Boundary (lead), Wrexham [L.]	1 0 0	— ..	..	.. 0 2 0 .. 0 2 0	—Aug. 1864
1800	Minera Mining Co. [L.], (ld.), Wrexham	25 0 0	— ..	7 8	.. 155 18 0 .. 10 0 0	—Aug. 1864
20000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	27½ ..	28	.. 16 19 7 .. 0 12 3	—Jan. 1864
40000	Mwyndy (iron ore) [L. £4] [S.E.]	2 10 0	— ..	..	.. 0 4 0 .. 0 2 0	—April, 1864
250	Nanty Mines (lead), Montgomery	20 0 0	— ..	..	.. 7 0 0 .. 1 0 0	—June, 1864
6000	New Birch Tor and Vitifer Cons. (tin)	1 6 6	2¼ ..	2¼ 2¼	— 0 9 6 .. 0 1 6	—July, 1864
5936	North Treskerby (copper), St. Agnes	1 9 0	3¼ ..	2¾ 3	.. 0 13 0 .. 0 2 6	—Feb. 1864
6400	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	— ..	..	.. 36 19 0 .. 0 2 6	—Mar. 1863
200	Parys Mines (copper), Anglesey [L.]	50 0 0	— ..	..	.. 112 10 0 .. 10 0 0	—July, 1864
1772	Polberro (tin), St. Agnes	15 0 0	— ..	..	.. 7 19 6 .. 0 10 0	—Nov. 1863
512	Polbreen (tin), St. Agnes	8 0 0	— ..	..	.. 1 0 0 .. 1 0 0	—July, 1863
1120	Providence (tin), Uny Lelant† [S.E.]	10 6 7	38 ..	36 38	.. 74 5 0 .. 1 0 0	—Aug. 1864
8000	Rosewall Hill and Ransom United	2 16 0	— ..	..	.. 0 10 0 .. 0 1 6	—June, 1863
512	South Caradon (cop.), St. Cleer* [S.E.]	1 5 0	— ..	..	.. 452 10 0 .. 7 0 0	—Sept. 1864
512	South Tolgus (cop.), Redruth, Cornwall*	8 0 0	— ..	..	.. 74 10 0 .. 1 0 0	—May, 1863
496	S. Wh. Frances (cop.), Illogan* [S.E.]	18 18 9	— ..	..	.. 370 18 6 .. 1 0 0	—Nov. 1863
4000	St. Day United (tin), Redruth	14 0 0	— ..	..	.. 0 5 0 .. 0 5 0	—Mar. 1864
940	St. Ives Consols (tin), St. Ives	8 0 0	— ..	..	— 490 10 0 .. 0 10 0	—May, 1864
8000	Tincroft (cop. tin), Pool, Illogan [S.E.]	9 0 0	15½ ..	15 16	.. 15 11 0 .. 0 10 0	—Sept. 1864
4200	Vigra and Clogau (copper) [L. £5]	4 0 0	— ..	..	.. 6 2 6 .. 1 10 0	—Mar. 1864
8000	West Basset (copper), Illogan [S.E.]	1 10 0	8½ ..	8 8½	.. 25 13 0 .. 0 5 0	—July, 1864
3000	W. Chiverton, (ld.), Ferranzabuloe [S.E.]	— ..	60 ..	55 60	.. 3 0 0 .. 0 15 0	—Aug. 1864
256	West Damsel (copper), Gwennap	38 10 0	— ..	..	.. 52 10 0 .. 1 10 0	—Sept. 1864
400	W. Wh. Seton (cop.), Camborne [S.E.]*	47 10 0	215 ..	210 220	.. 417 0 0 .. 4 0 0	—Oct. 1864
512	Wheal Basset (copper), Illogan* [S.E.]	5 2 6	91 ..	90 92½	.. 603 0 0 .. 1 10 0	—Oct. 1864
1000	Wheal Basset and Grylls (tin)	7 0 0	6½ ..	..	.. 3 0 0 .. 0 10 0	—Oct. 1863
512	Wheal Jane (silver-lead), Ken	3 10 0	— ..	..	.. 15 0 0 .. 0 10 0	—Aug. 1864
4295	Wheal Kitty (tin), St. Agnes	5 4 6	— ..	..	.. 1 13 6 .. 0 5 0	—Aug. 1864
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	2 0 6	— ..	..	.. 10 2 6 .. 0 7 6	—July, 1864
1024	Wh. Mary Ann (ld.), Menheniot [S.E.]	8 0 0	17 ..	16 17	.. 58 17 6 .. 0 10 0	—Sept. 1864
100	Wheal Mary (tin), Lelant	36 2 6	— ..	..	.. 288 5 0 .. 4 0 0	—Mar. 1864
80	Wheal Owles (tin), St. Just, Cornwall	70 0 0	— ..	..	.. 343 3 0 .. 5 0 0	—May, 1864
396	Wheal Seton (tin, copper), Camborne	58 10 0	207½ ..	200 205	.. 183 15 0 .. 4 0 0	—Oct. 1864
1040	Wh. Trelawny (sil.-ld.), Liskeard [S.E.]	5 17 0	20 ..	19 20	.. 50 5 0 .. 0 12 6	—Aug. 1864
2044	Wheal Tremayne (tin), Gwinear	6 11 3	— ..	..	.. 6 1 3 .. 0 5 0	—Nov. 1863
7000	Wicklow (copper) [L.], Wicklow	2 10 0	— ..	..	.. 14 11 0 .. 0 6 0	—April, 1864

[* Dividends paid every two months. † Dividends paid every three months.]

BRITISH MINES WITH DIVIDENDS IN ABEYANCE.

240	Boscean (tin), St. Just	20 10 0	— ..	..	.. 36 10 0 .. 1 0 0	—Mar. 1862
3000	Chiverton (lead), Perranzabuloe [S.E.]	6 0 0	6 ..	5½ 6	.. — .. —	— —
256	Condurrow (cop., tin), Camborne	76 10 0	— ..	..	.. 85 0 0 .. 2 0 0	—June, 1857
2450	Cook's Kitchen (copper), Illogan	18 5 9	15 ..	12 13	.. 1 7 0 .. 0 7 0	—May, 1862
1024	Copper Hill (copper), Redruth	12 0 0	— ..	..	.. 2 7 6 .. —	—Sept. 1862
1055	Craddock Moor (copper), St. Cleer	8 0 0	— ..	..	.. 7 13 0 .. 0 4 0	—July, 1862
4076	Devon and Cornwall (cop.), Tavistock	6 6 3	— ..	..	.. 0 10 0 .. 0 2 6	—Feb. 1859
3000	Dyfngwm (lead), Wales	12 6 6	— ..	..	.. 0 17 6 .. 0 2 6	—Jan. 1863
940	Fowey Consols (copper), Tywardreath	4 0 0	— ..	..	.. 41 9 3 .. 0 2 6	—June, 1860
6000	Great South Tolgus, Redruth	0 14 6	— ..	..	.. 7 18 6 .. 0 5 0	—Dec. 1861
10240	Gunnis Lake (Clitters' Adit)	0 2 0	— ..	..	.. 0 3 0 .. 0 1 6	—Mar. 1862
160	Levant (copper, tin), St. Just	2 10 0	— ..	..	.. 1091 0 0 .. 5 0 0	—May, 1860
640	Mount Pleasant (lead), Mold	4 0 0	— ..	..	.. 18 18 1 .. 0 7 6	—Aug. 1862
5000	Orsedd (lead), Flintshire	0 0 8	— ..	..	.. 0 10 4 .. 0 0 8	—Mar. 1862
5000	South Exmouth (lead), Christow	1 14 0	— ..	..	.. 0 5 0 .. 0 5 0	—Dec. 1862
380	Spearne Moor (tin, copper), St. Just	32 17 9	— ..	..	.. 9 15 0 .. 1 0 0	—June, 1862
572	Trelyon Consols (tin), St. Ives	14 0 0	— ..	..	.. 7 0 0 .. 0 10 0	—Sept. 1860
1000	Trumpet Consols (tin), near Helston	11 10 0	— ..	..	.. 11 0 0 .. 2 0 0	—Mar. 1862
12000	Twelve Apostles Amal. (ld.), Wrexham	1 0 0	— ..	..	.. — .. —	— —
1024	Wendron Consols (tin), Wendron	19 18 10	— ..	1 1½	.. 8 15 0 .. 1 0 0	—Jan. 1861
60	West Burton Gill (lead), Yorkshire	50 0 0	— ..	..	.. 14 10 0 .. 3 0 0	—June, 1861
1024	West Caradon (cop.), Liskeard [S.E.]	7 0 0	7 ..	6 7	.. 101 1 3 .. 0 10 0	—Oct. 1862
1024	Wheal Friendship (copper), Devon	20 0 0	— ..	..	.. 295 10 0 .. 5 0 0	—Feb. 1861
896	Wheal Margaret (tin), Uny Lelant	10 17 6	— ..	8 9	.. 76 5 0 .. 1 0 0	—May, 1863
6400	West Fowey Consols (tin and copper)	7 10 0	— ..	..	.. 0 19 0 .. 0 3 0	—May, 1862

FOREIGN DIVIDEND MINES.

20000	Australian (cop.), S. Australia [S.E.]	7 7 6	— ..	..	.. 0 1 0 .. 0 1 0	—Dec. 1863
2464	Burra Burra (cop.), South Australia	5 0 0	— ..	70	.. 320 0 0 .. 5 0 0	—Sept. 1864
6000	Central American (silver) [L.]	5 0 0	— ..	..	.. 4 6 8 .. 0 14 10	—Dec. 1863
18000	Cape Copper Mining [L. £10] [S.E.]	7 0 0	10 ..	9 10	.. 0 15 0 .. 0 5 0	—Sept. 1864
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	28 ..	26 28	.. 100 0 0 .. 0 8 0	—July, 1864
100000	Don Pedro No. Del Rey [L. £1] [S.E.]	0 10 0	— ..	⅜ ⅝	.. 0 0 9 .. 0 0 9	—Dec. 1863
70000	English and Australian [S.E.]	5 0 0	— ..	..	.. 1 12 0 .. 0 2 0	—Aug. 1864
18000	East Indian Coal, Calcutta [L.]	10 0 0	— ..	..	— 7½ per cent.	— Yearly.
28000	Fortuna (lead), Spain [L.] [S.E.]	2 0 0	3⅜ ..	3¼ 3¾	— 0 14 4 .. 0 3 0	—June, 1864
25000	Gen. Mining Assoc., Nova Scotia [S.E.]	20 0 0	23 ..	22 24	.. 21 10 0 .. 1 0 0	—June, 1864
68000	Kapunda Mining Co., Australia [S.E.]	1 0 0	1⅛ ..	⅞ 1⅛	.. 0 12 0 .. 0 1 0	—June, 1864
18000	Linares (ld.), Pozo Ancho, Spain [S.E.]	3 0 0	6 ..	5 6	.. 10 1 2 .. 0 5 0	—Aug. 1864
10000	Lusitanian (of Portugal) [S.E.]	2 0 0	— ..	..	.. 1 1 0 .. 0 2 0	—July, 1864
10000	Pontgibaud (sil.-lead), France [S.E.]	20 0 0	— ..	6 8	.. 1 7 3 .. 0 7 3	—Jan. 1864
97500	Port Phillip (gold), Clunes [S.E.]	1 0 0	— ..	¾ 1	.. 0 12 6 .. 0 1 0	—July, 1864
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	37 ..	34 36	.. 63 15 0 .. 2 10 0	—June, 1864
43174	Unit. Mexican (sil.), Mexico [S.E.]	Av. 28 5 0	5 ..	4¼ 4¾	.. 2 19 0 .. 0 5 0	—Sept. 1864
10000	Vancouver (coal) [L. £10]	5 0 0	— ..	..	.. 0 10 0 .. 0 5 0	—May, 1864
25000	Victoria (London) Mining Co. [L.]	1 0 0	— ..	..	.. 0 1 9 .. 0 1 9	—May, 1864
20000	West Canada Mining Company [L.]	1 0 0	— ..	..	.. 0 12 0 .. 0 5 0	—June, 1864
45000	Yudanamutana (cop.), S. A. [L.] [S.E.]	3 0 0	1¾ ..	1⅝ 1⅞	.. 0 5 0 .. 0 5 0	—Aug. 1863

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Alten and Quesnangen Uni. (cop.) [L. £5]	4 10 0	2¼ ..		.. 4 5 0 .. 0 15 0	—Nov. 1853
10000	Copiapo Mining Company, Chili [S.E.]	16 0 0	— ..		.. 6 18 0 .. 0 10 0	—Nov. 1862
10000	Gt. Barrier Land, Min., &c., N. Ze. [L. £5]	4 10 0	— ..		15 per cent.	—May, 1859
103815	Mariquita and New Granada [S.E.]	1 0 0	⅜ ..	⅜ ½	— 0 9 6 .. 0 1 6	—July, 1859

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call
35000	Alamillos (lead), Spain] L. £3]	1 0 0	1¼ ..		..Sept. 1864
100000	Anglo-Brazilian (gold) [L. £1] [S.E.]	0 5 0	— ..		..Dec. 1863
20000	Bearis Tin Streaming Company [L. £1]	0 17 6	— ..		..Oct. 1863
25000	Capula (silver), Mexico [L. £2] [S.E.]	1 0 0	— ..		..Feb. 1864
17000	Central Italian (copper) [7000 £2 paid]	0 6 0	— ..		..Jan. 1859
10000	Copiapo Smelting [L.], Chili	10 0 0	— ..		..Fully paid.
75000	Dun Mountain (copper), New Zealand [L.] [S.E.]	1 0 0	— ..		..Fully paid.
50000	East del Rey (gold), Brazil [L. £3] [S.E.]	1 5 0	— ..		..Oct. 1863
30000	East Kongsberg Native Silver Mining Co. of Norway [L. £5]	1 12 0	— ..		..Dec. 1863
8000	English and Canadian Mining Company [L.]	5 0 0	— ..		..Fully paid.
40000	Fortune (copper), West Australia [L.]	2 0 0	— ..		..Fully paid.
50000	Frontino and Bolivia (gold), New Granada [L. £2]	0 10 0	— ..		..Mar. 1864
80000	Great Northern (copper), South Australia [L. £2] [S.E.]	1 10 0	— ..		..June, 1862
24000	Hindostan (copper), Bengal [L. £5]	3 0 0	— ..		..Feb. 1863
4000	Hope Silver-Lead and Copper Mining Co. [L.], Jamaica	25 0 0	— ..		..Fully paid.
10000	Karbitz Colliery Company [L.]	1 0 0	— ..		..Fully paid.
30000	Lagunazo (sulphur, copper), Portugal [L.]	1 0 0	— ..		..Fully paid.
100000	Montes Aureos (gold), Brazil [L.] [S.E.]	2 0 0	2 ..	1¼ 1¾	..Fully paid.
10000	New Grand Duchy of Baden (silver-lead), near Freiburg	1 0 0	— ..		..Nov. 1858
50000	Nova Scotia (land and gold) [L. £2]	1 0 0	— ..		..Nov. 1862
10000	Otea (copper) [L. £2]	0 10 0	— ..		..
15000	Pachuca Silver Mining Company, Mexico [L. £1]	1 0 0	— ..		..June, 1863
50000	Panuelillo (copper) [L. £4] [S.E.]	1 0 0	1⅛ ..	1 1⅛	..Feb. 1864
6000	Peel River Land and Mineral [Limited]	100 0 0	— ..		..Stock.
23000	Quebrada (copper), Venezuela [L. £10]	6 10 0	— ..		..Sept. 1864
50000	Rosea Grande (gold), Brazil [L. £1]	0 5 0	— ..		..April, 1864
10000	San Roque (lead), Spain	5 0 0	— ..		..Fully paid.
60000	Santa Barbara (gold), Brazil [L. £1]	0 15 0	— ..		..Sept. 1864
120000	Scottish Australian Mining Company [L. £1]	0 17 6	— ..		..Feb. 1864
15000	South Europe Mining Company, Spain [L. £5]	3 0 0	— ..		..May, 1860
12000	Teplitz Colliery Co., Bohemia [L. £5]	3 0 0	— ..		..June, 1863
5000	Valgodemard Mining Company [L. £20]	8 0 0	— ..		..June, 1864
50000	Vallanzasca (gold), Italy [L. £1] [S.E.]	0 10 0	1½ ..	1 1½	..Oct. 1864
45000	Victor Emanuel (copper), Italy [L.]	1 0 0	— ..		..Fully paid.
1000	Western Africa Malachite (copper) [L.]	110 0 0	— ..		..Oct. 1862
12000	Wheal Ellen (copper), South Australia [L.]	5 0 0	— ..		..Fully paid.
40000	Worthing (copper . South Australia [L.] [S.E.]	1 0 0	— ..		..Fully paid.
75000	Yorke Peninsula [L. £1]	1 0 0	⅛ ..	¾ 1	..Fully paid.

PROGRESSIVE MINES.

Shares	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
1000	Alt-y-Crib (lead) [L. £5]	4 12 6	— ..		..July, 1864
6000	Bagtor (tin) [L.]	2 0 0	— ..		..Fully paid.
4000	Bedford Cons. (cop.), Tavistk.	2 9 0	— ..		..July, 1864
3200	Bedol Aur (lead), Holywell	0 12 6	— ..		..June, 1864
2000	Bershaven (copper), Ireland	1 0 0	— ..		..
500	Billins (lead)	30 0 0	— ..		..Fully paid.
6000	Boscawen (tin), Kenwyn	2 10 0	— ..		..Feb. 1864
7280	Boscundle (tin, cp.), St. Austell	7 10 0	— ..		..Sept. 1862
5000	Bottle Hill (tin) Plympton	1 8 6	— ..		..May, 1864
30000	Bromlow (ld.), Minsterley, Salop	1 0 0	— ..		..Fully paid.
300	Brynford Hall (lead), Flint	30 0 0	— ..	20 25	..Aug. 1863
500	Bryn Gwiog (lead), Flint	9 0 0	— ..		..June, 1864
1832	Bryntail (lead), Llanidloes	8 7 6	3½ ..	3½ 3¾	..June, 1864
6380	Buller & Bassett, (cp.) Redruth	4 11 6	— ..		..Feb. 1864
12000	Calstock Consols (cop.), Calst.	1 17 6	— ..		..
915	Calvadnack (tin), Wendron	25 3 6	— ..		..Aug. 1864
1000	Camborne Consols (copper)	18 10 0	— ..		..Feb. 1864
4800	Camborne Vean & Wh. Francis	9 18 4	— ..		..June, 1864
75000	CambrianConsolid. (gd.) [L. £2]	1 0 0	— ..		..Aug. 1862
8000	Cape Cornwall (cop.), [L. £2 10s.]	1 0 0	— ..		..Aug. 1864
12000	Caradon & Phœnix Cons. [L. £1]	0 10 0	— ..		..
914	Caradon Cons. (cop.), St. Cleer	29 6 6	— ..		..Sept. 1864
6000	Caradon Unit. (cop.), St. Neots	1 0 0	— ..		..June, 1863
2580	Carmarthen United (lead)	5 0 0	— ..		..Fully paid.
3000	Carnelice (tin and cop.), Zennor	1 0 0	0 10 0		..Jan. 1864
6000	Carn Camborne (cop.), Cambu.	1 11 0	34s. ..	32s. 34s.	..Oct. 1864
3000	Carn Vivian (tin, cop., lead)	2 1 6	— ..		..Nov. 1861
2048	Carnyorth (tin), St. Just	4 10 0	— ..		..June, 1864
20000	Caryafort [3200 £2½ pd., 16800 £1 pd.]	— ..	— ..		..
10000	Castleward, Ireland [L.]	1 0 0	— ..		..Fully paid.
2500	Cefn Cilcen (ld.), Flint [L. £5]	2 8 6	— ..		..Aug. 1864
800	Cefn Cwm Brwyno (lead)	4 0 0	— ..		..Sept. 1864
2000	Central Grylls (tin) [L. £3]	2 10 0	— ..		..Feb. 1864
2500	Central Minera (lead) [L. £5]	2 12 0	— ..		..Aug. 1864
6000	CharlotteUntd., Perranuthnoe	5 2 8	— ..		..Sept. 1864
3000	Chiverton Moor (lead)	3 0 0	— ..		..Oct. 1863
3000	Chiverton Valley (lead)	3 0 0	— ..		..Feb. 1864
4000	Clara Unit., Ponterwyd [L. £3]	2 2 0	— ..		..Jan. 1864
1024	Cleer's Hill (tin), St. Stephen's	0 2 0	— ..		..
787	Clijah & Wentworth (tin, cp.)	33 0 0	— ..		..Aug. 1864
3000	Clowance Wood [L. £5]	2 0 0	— ..		..Aug. 1864
16000	Coolartra & Bond [L.] [5800 £1 pd., 10700 12s. pd.]	— ..	— ..		..Jan. 1864
50000	Connorree (cop., sulph.) [L.]	1 0 0	— ..	19s. 20s.	..Fully paid.
6000	Cornish Clay and Tin [L.]	1 0 0	— ..		..Fully paid.
861	Crane (copper), Camborne	24 0 0	— ..		..June, 1864
30000	Crenver and Wh. Abraham [L.]	2 10 0	— ..		..
12000	Crelake (cop.), Tavistock	2 13 0	— ..		..April, 1864
2000	Crowlwm (lead), Llanidloes	1 11 0	— ..		..Dec. 1863
26000	Cuddra (cop., tin), St. Austell	4 5 0	— ..		..July, 1864
10000	Cwmsymlog (sil.-ld.), [L. £5]	2 0 0	— ..		..May, 1864
35000	Dale (lead), North Stafford	1 0 0	— ..		..Fully paid.
1000	Darren (lead) [L.], Cardigan	6 8 0	— ..		..May, 1864
2000	DeepLevel, Minera (ld.) [L. £5]	3 5 0	— ..		..Feb. 1862
672	Ding Dong (tin), Gulval	44 10 6	— ..		..Dec. 1863
20000	Dolfrwynog (gold) [L. £1]	0 15 0	— ..		..June, 1864
1000	Durlo (tin), Lelant	8 12 0	— ..		..Oct. 1864
1000	Eaglebrouk (lead) [L. £20]	17 2 0	— ..		..April, 1864
1000	East Basset and Grylls (tin)	2 7 6	— ..		..Aug. 1864
6000	E. Bottle Hill (tin), Plympton	0 4 6	— ..		..Aug. 1864
50000	East Cambrian (gold) [L. £1]	0 15 0	— ..		..Feb. 1864
6000	East Carn Brea (cop.) Redruth	3 15 0	7 ..	6¾ 7	..Feb. 1863
2000	East Chiverton (lead)	2 10 6	— ..		..Aug. 1864
50000	E. Clogau (gold), Merio. [L. £1]	0 6 0	— ..		..Mar. 1864
4000	East Devon Gt. Consols (cop.)	1 14 0	— ..		..May, 1864
2048	E. Falmouth (s.-ld.), Kenwyn	5 0 6	— ..		..April, 1864
6000	E. Grenville (cop.), Camborne	2 7 0	7¾ ..	7½ 7¾	..Aug. 1864
6000	E. Gt. Work (tin), Breage [L. £5]	3 10 0	— ..		..Oct. 1864
4000	E. Gunnis Lake & S. Redf. (cop.)	7 19 6	— ..	¼ ⅛	..Sept. 1864
6145	East Jane (sil.-ld.), Cardinham	2 7 0	— ..		..Mar. 1864
6000	East Laxey (lead) [L. £3]	2 0 0	2¼ ..	2 2¼	..July, 1864
1024	E. Margaret (tin), Uny Lelant	20 5 0	— ..		..Aug. 1864
8000	E. Polberro (tin) [L. £1] [4000 £1 pd.	4000 2s. 6d. pd.]			..Nov. 1863
3986	E. Providence (tin), Uny Lel.	4 9 8	— ..		..Sept. 1864
5610	East Seton (cop.), Camborne	0 10 0	— ..		..Dec. 1863
256	East Tolgus (copper), Redruth	88 0 0	— ..		..June, 1864
1024	E. Treskerby (cop.), Redruth	10 1 0	6½ ..	6 6¼	..Aug. 1864
9600	East Wheal Abraham (copper)	0 5 0	— ..		..Aug. 1864
1190	E. Wheal Agar (cop.), St. Cleer	11 17 0	— ..		..Sept. 1863
1300	E. Wheal Ellen (cop.) St. Agnes	0 7 6	— ..		..April, 1864
2000	E. Wh. Fortune (tin) Sithney	1 0 0	— ..		..April, 1863
2048	East Wheal Grylls (tin, cop.)	2 2 6	— ..		..July, 1864
6000	EastWheal Metal (tin and cop.)	— ..	— ..		..
4000	E. Wh. Russell, Tavis. [S.E.]	9 5 6	5 ..	4¼ 5	..Sept. 1864
6000	East Wheal Vor (tin and cop.)	5 0 0	— ..		..
2000	Erwfelin (lead), [L. £2]	1 0 0	— ..		..
6144	Esther Und. (tin), Cardingham	0 3 10	— ..		..Sept. 1864
6000	Fortescue Cons. (sil.), Endellion	0 12 6	— ..		..
6000	Furze Hill Wood Cons., Buckl.	1 5 6	— ..		..April, 1864
1026	Garden (tin), Morvah	4 17 9	— ..		..May, 1863
4096	Garlidna Untd. (tin), Wendron	4 1 6	— ..		..Mar. 1864
1000	Garreg (lead), Flint	5 14 6	— ..		..Dec. 1863
4000	Gawton (copper), Tavistock	2 9 6	— ..		..June, 1864
6000	Gen. Min. Co. for Irel. (cop.)	4 0 0	— ..		..
30000	GlasgowCaradonCon. (cp.) [L.]	1 0 0	— ..		..Fully paid.
32	Godolphin (cop., tin), Wrexham	4 0 0	— ..		..Aug. 1864
5700	Goginan (silver-lead)	12 10 0	— ..		..April, 1864
2000	Goich Hill (lead), Flintshire	1 4 5	— ..		..No call.
6144	Gonamena (copper), St. Cleer.	4 9 0	— ..		..Sept. 1864
2000	Goonzion (copper), St. Neot	1 12 6	— ..		..Aug. 1864
486	Gramb. & St. Aub. (cp.) [S.E.]	63 0 0	— ..	7 8	..Sept. 1864
5000	Great Brigan (cop.), Redruth	6 11 6	— ..		..Sept. 1864
4096	Great Caradon (cop.), St. Ive.	2 14 0	— ..		..Sept. 1864
10000	Great Devon and Bedford [L.]	1 15 0	— ..		..Mar. 1864
3000	Gt. East Lovell (tin), Helston	1 0 0	— ..		..
5000	Great North Downs (copper)	4 0 0	4¾ ..	4¼ 4¾	..Sept. 1864
6000	Gt. Retallack (sil.-ld., blende)	2 6 6	— ..		..April, 1864
6000	Great S. Chiverton (sil.-lead)	0 10 0	3